

Leu Val Tyr Thr Leu Ala Pro Arg Ala Asp Lys Asp Thr Glu Lys
 65 70 75 80
 Leu Val Gly Lys Leu Thr Arg Lys Phe Lys Val Gly Ala Phe Leu Tyr
 85 90 95
 Ser Glu Gly Thr Val Glu Asp Gln Ala Asn Leu Thr Asn Tyr Ala Gln
 100 105 110
 Arg Gln Ser Lys Ile Pro Leu Met Ile Thr Phe Asp Gly Glu Trp Gly
 115 120 125
 Leu Ala Met Arg Leu Glu Asn Thr Pro Val Phe Pro Arg Asn Ala Ala
 130 135 140
 Leu Gly Cys Ile Ser Asp Asn Thr Leu Ile Glu Ala Tyr Gly Gln Glu
 145 150 155 160
 Val Ala Arg Glu Leu Arg Glu Ile Gly Ala His Val Asn Phe Ala Pro
 165 170 175
 Asp Ala Asp Val Asn Thr Asn Pro Glu Asn Pro Val Ile His Val Arg
 180 185 190
 Ser Phe Gly Glu Asn Pro Lys Thr Val Ala Glu Lys Val Ile Ala Tyr
 195 200 205
 Gly Arg Gly Leu Glu Thr Gly Gly Ile Leu Ser Val Ser Lys His Phe
 210 215 220
 Pro Gly His Gly Asp Thr Asp Val Asp Ser His Gln Ala Leu Pro Ala
 225 230 235 240
 Val Tyr Tyr Asn Arg Ala Arg Leu Asp Ser Val Glu Leu Tyr Pro Phe
 245 250 255
 Lys Glu Ala Ile Gln Ala Gly Leu Gly Gly Val Met Val Gly His Leu
 260 265 270
 Gln Val Pro Ala Leu Glu Pro Asp Arg Ile Thr Pro Ser Ser Leu Ser
 275 280 285
 His Ser Ile Val Thr Asp Leu Leu Arg Gly Glu Leu Gly Phe Asn Gly
 290 295 300
 Leu Val Phe Thr Asp Ala Leu Ala Met Lys Gly Val Ala Ala Glu Ser
 305 310 315 320
 Asp Val Thr Val Lys Ala Leu Lys Ala Gly Asn Asp Met Val Leu Val
 325 330 335
 Gln Gln Asn Val Glu Lys Ala Gln Glu Ser Val Val Gln Ala Ile Lys
 340 345 350
 Asp Gly Arg Leu Thr Met Glu Glu Ile Asp Ala Lys Cys Arg Arg Ile
 355 360 365
 Leu Ala Tyr Lys Tyr Arg Leu Gly Leu Ser Arg Arg Pro Met Ile Pro
 370 375 380
 Val Asp Gly Leu Ser Asp Arg Ile His Thr Pro Glu Ala Gln Ala Leu
 385 390 395 400
 Val Thr Lys Leu Arg Thr Ser Ala Val Thr Val Leu Gly Asn Tyr Phe
 405 410 415
 Gln Ile Leu Pro Leu Thr Ala Thr Lys Gly Glu Ile Ala Val Leu Thr
 420 425 430
 Val Gly Asp Glu Gly Ser Asp Ala Ser Phe Ile Glu Gly Leu Arg Ser
 435 440 445
 Glu Leu Pro Leu Lys Thr Phe Arg Met Asp Lys Asn Thr Gly Glu Glu
 450 455 460
 Glu Arg Arg Lys Ile Val Lys Glu Leu Gly Asn Tyr Arg Arg Val Val
 465 470 475 480
 Val Cys Ile Thr Val Gln Asp Lys Glu Ala Gly Glu Tyr Arg Ser Phe
 485 490 495
 Phe Ala Gly Phe Arg Pro Gln Ala Pro Val Val Tyr Ala Phe Phe Thr
 500 505 510
 Ser Tyr Arg Ala Leu Ala Ser Leu Glu Glu Ala Ala Ala Arg Ser Ala
 515 520 525
 Ala Val Val Leu Ala His Ser Gly Glu Glu Asp Leu Gln Arg Tyr Val

530	535	540
Ala Asp Val Val Leu Gly Lys Ala Ser Ala Thr	Gly Arg Leu Ser Met	
545	550	555
Arg Ile Gly Asn Thr Phe Ala Ala Gly Ser Gly Val Asp Val Ile Ser		560
565	570	575
Gly Ser Pro Ala Gly Ile Ala Pro Glu Asp Tyr Gly Leu Lys Ser Tyr		
580	585	590
Arg Leu His Arg Ile Asp Ser Val Val Ala Ala Gly Leu Ala Ala Lys		
595	600	605
Ala Phe Pro Gly Cys Gln Val Leu Val Leu Arg His Gly Gln Pro Val		
610	615	620
Tyr Asp Lys Cys Phe Gly Thr His Ser Val Thr Asp Thr Thr Pro Val		
625	630	635
Arg Ala Thr Asp Leu Phe Asp Leu Ala Ser Leu Thr Lys Thr Ser Ala		640
645	650	655
Thr Leu Leu Ala Val Met Lys Leu Tyr Asp Gln Gly Arg Ile Glu Leu		
660	665	670
Thr Asp Ala Val Ser Lys Tyr Val Pro Ala Leu Arg Ala Thr Asn Lys		
675	680	685
Lys Asn Ile Thr Ile Arg Glu Leu Leu His Glu Ser Gly Leu Val		
690	695	700
Pro Tyr Ile Arg Phe Tyr Arg Asp Ala Ile Asp Glu Tyr Ser Val Thr		
705	710	715
Gly Pro Phe Thr Gln Gly Phe Val Asp Glu Trp His His Thr Arg Met		720
725	730	735
Gly Glu Tyr Thr Tyr Ala Cys Ser Asp Phe Lys Phe Lys Lys Gly Leu		
740	745	750
Val Ser Ala Thr Lys Thr Ser Gly His Thr Leu Gln Ile Ala Asp Gly		
755	760	765
Leu Trp Leu Asp Lys Lys Phe Lys Ala Ala Met Met Lys Ser Ile Ala		
770	775	780
Gln Ser Glu Leu Asp Arg Lys Arg Phe Val Tyr Ser Asp Ile Gly Phe		
785	790	795
Ile Leu Leu Gln Gln Val Val Glu Ala Val Thr Gly Lys Thr Leu Asp		800
805	810	815
Ala Tyr Leu Val Ser Glu Phe Tyr Arg Pro Met Gly Leu Glu His Thr		
820	825	830
Leu Phe His Pro Leu Asn Arg Tyr Lys Lys Ala Asp Ile Met Pro Thr		
835	840	845
Ala Ala Asn Asp Tyr Leu Arg Arg Gln Asp Leu Cys Gly Tyr Val His		
850	855	860
Asp Glu Ala Ala Ala Phe Met Gly Gly Val Ser Gly Asn Ala Gly Leu		
865	870	875
Phe Ser Thr Ala Gln Glu Leu Gly Lys Ile Tyr Gln Met Ile Leu Asn		880
885	890	895
Glu Gly Glu Leu Asp Gly Lys Arg Tyr Leu Arg Pro Glu Thr Cys Arg		
900	905	910
Ile Phe Thr Thr Glu Lys Ser Ala Val Ser His Arg Gly Leu Gly Tyr		
915	920	925
Asp Lys Pro Asn Leu Lys Asp Pro Lys Ala Asn Ala Cys Ala Ser Ser		
930	935	940
Ala Pro Ala Ser Val Tyr Gly His Thr Gly Phe Thr Gly Thr Cys Ala		
945	950	955
Trp Val Asp Pro Glu Asn Asp Leu Val Tyr Ile Phe Leu Ser Asn Arg		960
965	970	975
Leu Cys Pro Asp Ala Trp Asn Gly Lys Leu Asn Ser Met Lys Ile Arg		
980	985	990
Gln Ala Val Gln Glu Val Ile Tyr Gln Ser Leu Tyr Thr Pro Glu		
995	1000	1005

<210> 10159
 <211> 466
 <212> PRT
 <213> B.fragilis

<400> 10159

Thr	Met	Asp	Leu	Ser	Ala	Ala	Lys	Leu	Tyr	Asn	Ser	Gln	Arg	Met	Asn
1			5					10					15		
Arg	Ala	Ile	Ser	Arg	Lys	Lys	Phe	Tyr	Phe	Trp	Lys	Ile	Ile	Leu	Glu
			20					25					30		
Gly	Pro	Gly	Lys	Lys	Trp	Glu	Pro	Asn	Arg	Arg	Thr	Leu	Lys	Asp	Leu
	35					40					45				
Gly	Met	Val	Glu	Glu	Pro	Tyr	Gly	Lys	Lys	Thr	Leu	Phe	Ser	Leu	Phe
	50					55					60				
Asp	Met	Thr	Glu	Ser	Asp	Gly	Gly	Lys	Arg	Gly	Leu	Glu	Lys	Trp	Leu
65					70				75					80	
Val	His	Pro	Leu	Ser	Asp	Trp	Lys	Ala	Leu	His	Glu	Arg	Gln	Glu	Ala
						85			90				95		
Ile	Arg	Tyr	Pro	Asp	Phe	Pro	Glu	Ile	Arg	Ile	Cys	Arg	Glu	Glu	Leu
			100				105					110			
Asp	Phe	Ile	Glu	Phe	Tyr	Leu	Ser	Gln	Gly	Asp	Arg	Pro	Thr	Arg	Val
	115					120					125				
Ser	Tyr	Leu	Glu	Ser	Ala	Phe	Ser	Tyr	Ile	Phe	Arg	His	Phe	Arg	Ala
	130					135					140				
Thr	Pro	Glu	Arg	Tyr	Val	Ile	Arg	Arg	Gly	Thr	Lys	Leu	Leu	Glu	Asn
145					150				155				160		
Val	Leu	Leu	Glu	Leu	Lys	Thr	Phe	Ala	Asp	His	Val	Thr	Ala	Leu	Ser
					165				170				175		
Pro	Arg	Leu	Ile	Arg	Asn	Ile	Ala	Ala	Thr	Ile	Ser	Glu	Ile	Tyr	Gln
		180					185					190			
Ala	Thr	Glu	Leu	Gly	Lys	Met	Val	Asp	Ser	Cys	Gly	Gln	Glu	Asp	Ser
	195					200					205				
Phe	Tyr	Arg	Thr	Asp	Arg	Leu	Asp	Tyr	Ile	Phe	Arg	Tyr	Arg	Arg	Asn
	210					215				220					
His	Thr	Ile	Ala	Ala	Leu	Leu	Ser	Ile	Val	Tyr	Gln	Leu	Asp	Ala	Ile
225					230				235				240		
Arg	Thr	Val	His	Arg	Thr	Ala	Val	Thr	Lys	Gly	Trp	Cys	Phe	Pro	Ser
					245				250				255		
Phe	Thr	Asn	Asp	Ser	Lys	Phe	Met	Leu	Cys	Asn	Phe	Tyr	His	Pro	Gln
		260				265					270				
Val	Lys	Asp	Ala	Val	Ala	Asn	Asp	Trp	Glu	Met	Glu	Asn	Gly	Asn	Ile
	275					280					285				
Cys	Ile	Phe	Thr	Gly	Ser	Asn	Met	Ala	Gly	Lys	Ser	Thr	Thr	Leu	Lys
	290					295				300					
Ala	Ile	Ala	Ser	Ala	Val	Trp	Leu	Ala	His	Ala	Gly	Phe	Pro	Val	Pro
305					310				315				320		
Ala	Ser	Ser	Met	Val	Cys	Pro	Met	Phe	Asp	Gly	Ile	Phe	Thr	Ser	Ile
					325				330				335		
Asn	Leu	Pro	Asp	Ser	Leu	Arg	Asp	Gly	Arg	Ser	Tyr	Phe	Tyr	Ala	Glu
		340				345					350				
Val	Leu	Arg	Val	Lys	Glu	Val	Leu	Glu	Gln	Ile	Asn	Lys	Gly	His	His
	355					360					365				
Cys	Phe	Val	Leu	Phe	Asp	Glu	Leu	Phe	Arg	Gly	Thr	Asn	Ala	Arg	Asp
	370					375				380					
Ala	Phe	Glu	Ala	Ser	Val	Ala	Val	Ala	Glu	Val	Leu	Lys	Ala	Lys	Ala
385					390				395				400		
Tyr	Ser	Arg	Phe	Leu	Ile	Ser	Thr	His	Ile	Ile	Glu	Leu	Ala	Arg	Lys
					405				410				415		

Leu Asp Gly Asp Asp Ala Cys Cys Phe Tyr Tyr Leu Glu Ser Ala Ile
 420 425 430
 Val Asp Asp Glu Leu Ile Cys Asn His Lys Val Lys Pro Gly Ile Ser
 435 440 445
 Glu Ser Arg Val Gly Tyr Trp Ile Val Lys Lys Glu Leu Ala Gly Phe
 450 455 460
 Glu Lys
 465

<210> 10160

<211> 310

<212> PRT

<213> B.fragilis

<400> 10160

Ile Met Asn Gln Glu Ile Leu Asn Arg Tyr Leu Thr Gly Asp Ala Ser
 1 5 10 15
 Ala Glu Glu Lys Gln Met Val Val Arg Trp Leu Asp Ala Asp Pro Gln
 20 25 30
 His Met Arg Glu Tyr Leu Ala Leu Arg Lys Leu His Asp Ile Thr Leu
 35 40 45
 Trp Gln Glu Lys Pro Ala Ala Thr Val Asp Lys Lys Lys Arg Leu Thr
 50 55 60
 Leu Pro Tyr Ile Arg Glu Phe Ile Lys Ile Ala Ala Ile Phe Leu Ile
 65 70 75 80
 Ala Val Thr Ser Val Tyr Phe Leu Ala Pro Glu Arg Gly Lys Asp Thr
 85 90 95
 Pro Asp Leu Lys Ala Ile His Val Pro Ser Gly Gln Arg Ala Glu Leu
 100 105 110
 Thr Leu Gly Asp Gly Thr Arg Val Cys Leu Asn Ser Asn Thr Thr Leu
 115 120 125
 Thr Phe Pro Asp His Phe Asp Arg Lys Glu Arg Arg Val Thr Leu Asp
 130 135 140
 Gly Glu Gly Tyr Phe Gln Val Ala Lys Asn Asp Lys Lys Pro Phe Ile
 145 150 155 160
 Val Gln Ala Lys Glu Tyr Glu Val Arg Val Leu Gly Thr Glu Phe Asn
 165 170 175
 Val Met Met Tyr Lys Asp Gln Asp Phe Phe Glu Thr Val Leu Leu Lys
 180 185 190
 Gly Ser Val Glu Val Asn Glu Thr Thr Gly Arg Lys Val Lys Leu
 195 200 205
 Gln Pro Asn Glu Arg Leu Phe Gly Lys Ala Gly Gln Leu Arg Lys Glu
 210 215 220
 Ser Ile Ser Glu Trp Asn Arg Ala Leu Trp Met Gln Gly Ile Leu Tyr
 225 230 235 240
 Phe Asp Asn Thr Arg Met Asp Glu Ile Ile Arg Gln Leu Gly Leu Tyr
 245 250 255
 Tyr Asp Val Lys Phe Ile Leu Glu Lys Glu Ser Leu Ala Asn Val Arg
 260 265 270
 Phe Thr Gly Lys Phe Arg Ile Arg Asp Gly Val Glu His Val Leu Lys
 275 280 285
 Val Leu Gln Leu Lys Cys Lys Phe Thr Tyr Gln Arg Asp Glu Asp Ser
 290 295 300
 Asn Thr Ile Thr Ile Asn
 305 310

<210> 10161

<211> 1085

<212> PRT

<213> B.fragilis

<400> 10161

Val Leu Ile Asn Thr Val Tyr Lys Cys Met Lys Asn Thr Leu Ile Lys
 1 5 10 15
 Thr Ser Lys Ile Val Asn Lys Ser Ile Ser His Thr Met Lys Met Ile
 20 25 30
 Val Leu Phe Leu Phe Val Phe Ile Ser Gly Val Phe Ala Gly Asn Ala
 35 40 45
 Asn Ser Gln Glu Thr Lys Val Ser Ile Ser Lys Asn Asn Lys Pro Ile
 50 55 60
 Arg Glu Ile Leu Gly Glu Ile Glu Arg Gln Thr Asp Tyr Leu Phe Val
 65 70 75 80
 Tyr Ser Glu Lys Glu Val Asp Val Asn Gln Arg Lys Thr Val Asn Val
 85 90 95
 Ser Gln Gln Arg Val Ala Asp Val Leu Ser Ser Leu Phe Arg Ser Thr
 100 105 110
 Asn Val Gly Tyr Ala Met Glu Gly His Asn Ile Met Leu Met Ala Lys
 115 120 125
 Thr Thr Gln Thr Asp Ala Ala Gln Gln Lys Arg His Ile Thr Gly Val
 130 135 140
 Val Lys Asp Ile Lys Gly Glu Thr Ile Ile Gly Ala Asn Ile Met Ile
 145 150 155 160
 Lys Gly Thr Gly Thr Gly Val Ser Thr Asn Ile Asp Gly Glu Phe Ser
 165 170 175
 Ile Glu Ala Ala Ala Gly Asp Glu Leu Ile Val Ser Phe Ile Gly Tyr
 180 185 190
 Leu Thr Gln Thr Ile Lys Ile Asp Ser Gln Lys Thr Leu Asn Ile Lys
 195 200 205
 Leu Leu Glu Asp Thr Lys Thr Leu Glu Glu Val Val Val Val Gly Tyr
 210 215 220
 Thr Val Gln Thr Lys Ser Ala Val Thr Gly Ser Val Ala Val Val Lys
 225 230 235 240
 Ala Asp Lys Leu Lys Asp Val Asn Thr Leu Glu Val Gly Ser Met Leu
 245 250 255
 Gln Gly Lys Val Ser Gly Val Tyr Val Ser Gly Ser Ser Gly Glu Pro
 260 265 270
 Gly His Ala Ser Lys Ile Arg Ile Arg Gly Lys Gly Thr Leu Asn Ser
 275 280 285
 Ser Val Ser Pro Leu Trp Val Val Asp Gly Val Ile Val Gly Glu Asp
 290 295 300
 Pro Gly Leu Asn Pro Asn Glu Ile Asp Asn Ile Ser Val Leu Lys Asp
 305 310 315 320
 Gly Ser Ala Thr Ala Leu Tyr Gly Ser Arg Ala Ala Asn Gly Val Ile
 325 330 335
 Val Val Thr Thr Lys Arg Gly Glu Tyr Asp Ala Asn Lys Tyr Ser Val
 340 345 350
 Ser Ile Asn Ala Gly Val Ser Leu Leu Ser Thr Gly Arg Leu Glu Met
 355 360 365
 Met Asn Ser Gln Glu Leu Tyr Asp Tyr Gln Lys Ser Trp Asn Asn Gln
 370 375 380
 Ser Trp Phe Thr Glu Glu Leu Leu Lys His Asn Thr Asp Trp Phe Lys
 385 390 395 400
 Glu Ala Ser Lys Pro Gly Leu Tyr Thr Asn Ala Asn Ile Thr Tyr Thr
 405 410 415
 Gly Ser Ser Gly Arg Met Arg Ser Phe Val Met Ala Asp Tyr Tyr Arg
 420 425 430
 Glu Glu Gly Ala Ile Lys Asp Phe Thr Leu Asp Arg Phe Thr Phe Arg
 435 440 445

Ser Asn Asn Asp Val Lys Phe Thr Asp Arg Phe Thr Met Ser Thr Lys
 450 455 460
 Ile Ser Gly Ser Leu Ser Arg Thr Asp Ser Gln Gln Arg Ser Val Tyr
 465 470 475 480
 Asn Thr Tyr Leu Tyr Leu Pro Trp Asp Phe Pro Tyr Asn Glu Asp Gly
 485 490 495
 Ser Ile Arg Ser Gly Gln Glu Gln Asp Trp Arg Gly Arg Asp Gly Ile
 500 505 510
 Asn Asp Met Tyr Asp Leu Gln Trp Asn Trp Ser Arg Ser Lys Lys Leu
 515 520 525
 Thr Val Asp Gly Thr Ile Asn Phe Asn Tyr Gln Ile Thr Asp Trp Leu
 530 535 540
 Arg Phe Glu Ser Asn Asn Tyr Ile Arg Tyr Ile Ser Asn Arg Ser Glu
 545 550 555 560
 Ser Tyr Thr Asp Lys Arg Ser Arg Ser Gly Gln Ser Asp Lys Gly Ser
 565 570 575
 Leu Ser Asn Ser Asn Ser Leu Leu Thr Lys Gln Phe Thr Asn Gln Met
 580 585 590
 Ile Arg Phe Glu Lys Ser Phe Gly Lys His Lys Val Asn Ala Leu Gly
 595 600 605
 Ala Tyr Glu Tyr Thr Arg His Phe Tyr Glu Ser Thr Ser Ala Glu Gly
 610 615 620
 Arg Gly Ile Gln Pro Gly Arg Glu Ile Leu Asp Val Thr Thr Gly Ile
 625 630 635 640
 Lys Ser Ile Gly Gly Tyr Lys Asp Ala Ile Ala Thr Gln Ser Ala Leu
 645 650 655
 Phe Asn Ala Asn Tyr Asp Tyr Asp Asn Arg Tyr Met Gly Gln Val Ser
 660 665 670
 Tyr Arg Met Asp Glu Ser Ser Cys Phe Gly Lys Asn Asn Arg Met Gly
 675 680 685
 His Phe Phe Thr Val Ser Gly Gly Trp Asn Ile Gln Asn Glu Thr Phe
 690 695 700
 Phe Glu Ser Leu Arg Glu Ser Val Asn Gln Leu Lys Val Arg Val Ser
 705 710 715 720
 Tyr Gly Ser Leu Gly Asn Thr Pro Gly Ala Tyr Tyr Gly His Tyr Pro
 725 730 735
 Leu Tyr Ser Ser Met Met Tyr Asn Asp Glu Val Ala Tyr Phe Pro Ser
 740 745 750
 Gln Met Gly Asn Ala Asp Leu Ser Trp Glu Lys Cys Tyr Thr Thr Asn
 755 760 765
 Ile Gly Ile Asp Ala Arg Phe Phe Asp Arg Phe Gly Val Thr Ile Asp
 770 775 780
 Leu Tyr Asn Lys Asn Thr Ser Asp Leu Leu Tyr Tyr Ala Pro Leu Pro
 785 790 795 800
 Asn Ile Ser Gly Tyr Thr Gly Gln Tyr Lys Asn Val Gly Ala Ile Asn
 805 810 815
 Asn Lys Gly Leu Glu Ile Ser Leu Asn Ala Asp Val Ile Arg Thr Ser
 820 825 830
 Lys Phe Gln Trp Thr Ser Asp Phe Asn Ile Gly Phe Asn Arg Asn Arg
 835 840 845
 Val Thr Glu Leu Tyr Gly Arg Lys Pro Glu Leu Lys Gly Leu Lys Arg
 850 855 860
 Leu Glu Glu Arg Arg Asp Met Asp Glu Trp Tyr Leu Lys Glu Trp Ala
 865 870 875 880
 Gly Val Asp Pro Ala Asn Arg Ser Pro Leu Trp Tyr Thr Pro Arg Trp
 885 890 895
 Glu Trp Pro Lys Ala Gln Leu Pro Asp Ser Tyr Asn Lys Ala Asp Arg
 900 905 910
 Val Tyr Cys Gly Ser Ala Ala Arg Lys Phe Thr Gly Gly Trp Met Asn

915	920	925
Ser Phe Ser Tyr Lys Gly Phe Thr Leu Thr Ala Asn Phe Asp Phe Val		
930	935	940
Tyr Gly Asn Leu Leu Tyr Asn Gln Ser Arg Glu Leu Leu Asp Ser Asp		
945	950	955
Gly Ala Tyr Ala Asp Tyr Asn Ser Met Lys Leu Lys Ser Gly Trp Lys		
965	970	975
Arg Trp Glu Lys Glu Gly Asp Ile Ala Thr His Pro Lys Ala Ile Asn		
980	985	990
Gly Gly Asn Lys Asn Ser Asn Lys Ser Ser Ser Arg Tyr Leu Glu Lys		
995	1000	1005
Gly Asn Tyr Phe Ser Leu Arg Asn Leu Ser Leu Gly Tyr Ser Ile Pro		
1010	1015	1020
Glu Lys Leu Cys Gly Lys Leu Gly Leu Gln Arg Val Asn Val Ser Cys		
1025	1030	1035
Ser Ala Asp Asn Leu Phe Thr Leu Thr Pro Phe Ser Gly Val Ser Pro		
1045	1050	1055
Gln Leu Ser Asp Ser Ser Thr Asp Gly Tyr Ala Gly Thr Ile Tyr Pro		
1060	1065	1070
Leu Ser Arg Arg Ile Val Leu Gly Leu Asn Val Ser Phe		
1075	1080	1085

<210> 10162

<211> 343

<212> PRT

<213> B.fragilis

<400> 10162

Phe Val Cys Asn Lys His Leu Ile Leu Thr Asn Pro Leu Asn Lys Ser		
1	5	10
Ile Met Asn Ser Ser Met Glu Lys Pro Tyr Val Val Gly Ile Asp Ile		
20	25	30
Gly Gly Thr Asn Thr Val Phe Gly Ile Val Asp Ala Arg Gly Thr Ile		
35	40	45
Ile Ala Ser Gly Ala Val Lys Thr Gln Val Tyr Pro Thr Val Glu Glu		
50	55	60
Tyr Ala Asp Glu Val Cys Lys Asn Leu Leu Pro Leu Ile Ile Ala Asn		
65	70	75
Gly Gly Val Asp Lys Ile Lys Gly Ile Gly Ile Gly Ala Pro Asn Gly		
85	90	95
Asn Tyr Tyr Thr Gly Thr Ile Glu Phe Ala Pro Asn Leu Pro Trp Lys		
100	105	110
Gly Val Leu Pro Leu Ala Ser Met Phe Glu Glu Arg Leu Gly Ile Pro		
115	120	125
Thr Ala Leu Thr Asn Asp Ala Asn Ala Ala Val Gly Glu Met Thr		
130	135	140
Tyr Gly Ala Ala Arg Gly Met Lys Asp Phe Ile Met Ile Thr Leu Gly		
145	150	155
160		
Thr Gly Val Gly Ser Gly Ile Val Ile Asn Gly Gin Val Val Tyr Gly		
165	170	175
His Asp Gly Phe Ala Gly Glu Leu Gly His Val Ile Val Arg Arg Asp		
180	185	190
Gly Arg Ile Cys Gly Cys Gly Arg Lys Gly Cys Leu Glu Thr Tyr Cys		
195	200	205
Ser Ala Thr Gly Val Ala Arg Thr Ala Arg Glu Phe Leu Ala Ala Arg		
210	215	220
Thr Asp Ala Ser Leu Leu Arg Asn Ile Pro Ala Glu Ser Ile Val Ser		
225	230	235
240		
Lys Asp Val Tyr Asp Ala Ala Val Gln Gly Asp Lys Leu Ala Gln Glu		

245	250	255
Ile Phe Glu Phe Thr Gly Asn Ile Leu Gly Glu Ala Leu Ala Asp Ala		
260	265	270
Ile Ala Phe Ser Ser Pro Glu Ala Ile Leu Phe Gly Gly Leu Ala		
275	280	285
Lys Ser Gly Asp Tyr Ile Met Lys Pro Ile Met Lys Ala Met Glu Asn		
290	295	300
Asn Leu Leu Asn Ile Tyr Lys Gly Lys Ala Lys Leu Leu Val Ser Glu		
305	310	315
Leu Lys Asp Ser Asp Ala Ala Val Leu Gly Ala Ser Ala Leu Ala Trp		
325	330	335
Glu Leu Lys Asp Leu Arg Asp		
340		

<210> 10163

<211> 368

<212> PRT

<213> B.fragilis

<400> 10163

Asn Lys Met Lys Lys Tyr Leu Lys Ile Thr Leu Leu Val Val Val Ala			
1	5	10	15
Ala Ile Phe Ile Gly Thr Phe Ile Phe Leu Tyr Gln Lys Ser Lys Pro			
20	25	30	
Lys Thr Thr Val Tyr Glu Thr Val Pro Glu Ile Ala Asp Leu Glu			
35	40	45	
Lys Thr Thr Val Ala Thr Gly Lys Val Glu Pro Arg Asp Glu Val Leu			
50	55	60	
Ile Lys Pro Gln Ile Ser Gly Ile Ile Ser Glu Val Tyr Lys Glu Ala			
65	70	75	80
Gly Gln Thr Ile Lys Gln Gly Glu Val Ile Ala Lys Val Lys Val Ile			
85	90	95	
Pro Glu Leu Gly Gln Leu Asn Ser Ala Glu Ser Arg Val Arg Val Ala			
100	105	110	
Glu Ile Ser Thr Ala Gln Ala Glu Thr Asp His Glu Arg Ile Lys Lys			
115	120	125	
Leu Tyr Asn Asp Lys Leu Ile Ser Arg Glu Asp Tyr Glu Lys Ser Glu			
130	135	140	
Val Glu Ile Lys Lys Ala Arg Glu Glu Leu Gln Thr Ala Lys Asp Ala			
145	150	155	160
Leu Glu Ile Ile Lys Glu Gly Ile Thr Lys Asn Ser Ala Ser Phe Ser			
165	170	175	
Ser Thr Leu Ile Arg Ser Thr Ile Asp Gly Leu Ile Leu Asp Val Pro			
180	185	190	
Ile Lys Val Gly Asn Ser Val Ile Met Ser Asn Thr Phe Asn Asp Gly			
195	200	205	
Thr Thr Ile Ala Thr Val Ala Asn Met Asn Asp Leu Ile Phe Lys Gly			
210	215	220	
Lys Ile Asp Glu Thr Glu Val Gly Arg Ile His Glu Gly Met Pro Val			
225	230	235	240
Lys Leu Thr Ile Gly Ala Leu Gln Asn Leu Thr Phe Asp Ala Glu Leu			
245	250	255	
Glu Tyr Ile Ser Pro Lys Gly Val Glu Glu Asn Gly Ala Asn Gln Phe			
260	265	270	
Glu Ile Lys Ala Ala Val His Ala Pro Asp Ser Val Gln Ile Arg Ser			
275	280	285	
Gly Tyr Ser Ala Asn Ala Glu Ile Val Leu Gln Arg Ala Gln Lys Val			
290	295	300	
Leu Ala Val Pro Glu Gly Ile Ile Glu Phe Ser Gly Asp Ser Thr Phe			

305	310	315	320
Val Trp Val Met Thr Asp Ser Ile Pro Glu Gln Lys Phe Glu Arg Arg			
325	330	335	
Gln Ile Lys Thr Gly Met Ser Asp Gly Ile Lys Leu Glu Ile Lys Glu			
340	345	350	
Gly Leu Thr Gly Lys Glu Lys Val Arg Ala Ser Glu Lys Lys Asp Lys			
355	360	365	

<210> 10164

<211> 450

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (83)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10164

Gly Lys Tyr Glu Ser Pro Thr Met His Asn Met Arg Asn Lys Ile Leu			
1	5	10	15
Ile Asn Leu Leu Ile Leu Thr Gly Leu Ser Ala Tyr Thr Ala Gln Ala			
20	25	30	
Gln Glu Gly Trp Thr Leu Arg Arg Cys Ile Asp Tyr Ala Ile Glu His			
35	40	45	
Asn Ile Asn Val Gln Gln Thr Ala Asn Ser Ala Glu Gln Ser Lys Val			
50	55	60	
Glu Val Asn Thr Ala Lys Trp Ala Arg Leu Pro Asn Leu Ser Gly Ser			
65	70	75	80
Ala Ser Xaa Asn Trp Ser Trp Gly Arg Thr Ala Ser Pro Val Asp Asn			
85	90	95	
Thr Tyr Asn Asp Ile Asn Ser Gly Ser Ser Ser Phe Ser Leu Gly Thr			
100	105	110	
Asn Ile Pro Leu Phe Thr Gly Leu Glu Leu Pro Asn Gln Tyr Ala Leu			
115	120	125	
Thr Lys Leu Asn Leu Lys Ala Ala Ile Glu Asp Leu Asn Lys Ala Lys			
130	135	140	
Glu Asp Leu Ala Ile Asn Val Thr Ser Ala Tyr Leu Gln Val Leu Phe			
145	150	155	160
Asn Gln Glu Leu Ser Lys Val Ala Gln Ser Gln Val Gly Leu Ser Lys			
165	170	175	
Glu Gln Leu Ser Arg Ile Thr Arg Leu His Glu Val Gly Lys Ala Ser			
180	185	190	
Pro Ala Glu Val Ala Glu Ala Lys Ala Arg Val Ala Gln Asp Glu Met			
195	200	205	
Ser Ala Val Gln Ala Asp Asn Asn Tyr Arg Leu Ala Leu Leu Asp Leu			
210	215	220	
Ser Gln Leu Leu Glu Leu Pro Thr Pro Glu Asn Phe Ser Leu Ala Thr			
225	230	235	240
Pro Asp Thr Glu Leu Glu Phe Ser Pro Leu Thr Ser Pro Asp Glu Ile			
245	250	255	
Tyr Asn Gln Ala Met Leu Tyr Lys Pro Gly Ile Lys Ala Ala Glu Tyr			
260	265	270	
Arg Leu Glu Gly Ser Glu Lys Asn Val Arg Ile Ala Lys Ser Ser Tyr			
275	280	285	
Tyr Pro Gln Leu Ser Phe Ser Ala Gly Leu Gly Thr Asn Phe Tyr Thr			
290	295	300	
Val Asn Gly Asn Ala Gly Ser Asn Phe Gly Asn Gln Met Lys Asn Asn			
305	310	315	320

6010

Leu Asn Lys Tyr Ala Gly Phe Ser Leu Asn Ile Pro Leu Phe Asn Arg
 325 330 335
 Leu Ala Thr Arg Asn Arg Val Arg Thr Ala Arg Leu Gln Gln Thr Asn
 340 345 350
 Leu Ala Leu Gln Leu Asp Asn Thr Lys Lys Val Leu Tyr Lys Glu Ile
 355 360 365
 Gln Gln Ala Trp Tyr Asn Ala Ile Ala Ala Glu Ser Lys Phe Lys Ser
 370 375 380
 Ser Glu Ser Ala Val Glu Ala Ser Gln Glu Ser Phe Arg Leu Met Ser
 385 390 395 400
 Glu Lys Phe Asp Asn Gly Lys Ala Thr Ser Val Glu Tyr Asn Glu Ser
 405 410 415
 Lys Leu Asn Leu Thr Lys Ala Leu Ser Asp Arg Ile Gln Ala Lys Tyr
 420 425 430
 Asp Tyr Leu Phe Arg Thr Lys Ile Leu Asp Phe Tyr Lys Gly Gln Pro
 435 440 445
 Ile Glu
 450

<210> 10165

<211> 119

<212> PRT

<213> B.fragilis

<400> 10165

Thr Thr Met Asp Leu Ile Lys Ile Ala Glu Glu Ala Phe Ala Thr Gly
 1 5 10 15
 Lys Gln His Pro Ser Phe Lys Ala Gly Asp Thr Val Thr Val Ala Tyr
 20 25 30
 Arg Ile Ile Glu Gly Asn Lys Glu Arg Val Gln Leu Tyr Arg Gly Val
 35 40 45
 Val Ile Lys Ile Ala Gly His Gly Glu Lys Lys Arg Phe Thr Val Arg
 50 55 60
 Lys Met Ser Gly Thr Val Gly Val Glu Arg Ile Phe Pro Ile Glu Ser
 65 70 75 80
 Pro Ala Ile Asp Ser Ile Glu Val Asn Lys Val Gly Lys Val Arg Arg
 85 90 95
 Ala Lys Leu Tyr Tyr Leu Arg Ala Leu Thr Gly Lys Lys Ala Arg Ile
 100 105 110
 Lys Glu Lys Arg Val Asn Gly
 115

<210> 10166

<211> 117

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (110),(111),(112),(117)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10166

Ile His Ser Leu His Ile Glu Met Gly Lys Tyr Arg Thr Lys Gly Ser
 1 5 10 15
 Ile Ala Leu Ile Ile Thr Gly Ser Val Leu Ile Leu Val Leu Ala Gly
 20 25 30
 Leu Tyr Leu Gly Arg Asn Gly Ile Leu Cys Arg Thr Ala Asp Lys Arg
 35 40 45

Ile Leu Tyr Ala Glu Gln Lys Tyr Gly Leu Ser Ile Cys Tyr Glu Asp
 50 55 60
 Leu Arg Met Lys Gly Leu Asn Glu Ile Glu Leu Lys Asn Leu Ser Ile
 65 70 75 80
 Val Pro Arg Asn Arg Asp Thr Leu Leu Thr Leu His Thr Leu Asn Met
 85 90 95
 His Leu Asn Phe Trp Lys Leu Arg Gly Ser Leu His Xaa Xaa Xaa
 100 105 110
 Gln Gln Arg Ser Xaa
 115

<210> 10167

<211> 266

<212> PRT

<213> B.fragilis

<400> 10167

Val Leu Lys Asp Met Lys Gln Asn Tyr Ala Lys Ile Ile Ser Gly Phe
 1 5 10 15
 Ile Leu Ala Gly Leu Leu Thr Phe Ser Ser Cys Gln Ser Thr His Glu
 20 25 30
 Met Ala Lys Thr Asp Tyr Gln Ile Ala Lys Val Glu Gly Arg Met Ile
 35 40 45
 Asp Ile Asp Ala Lys Trp Asp Thr His Pro Asp Ala Asp Ala Val Ala
 50 55 60
 Ile Leu Lys Pro Tyr Lys Glu Lys Ile Asp Asn Met Met Tyr Glu Val
 65 70 75 80
 Ile Gly Ser Ser Glu Gln Lys Met Asp Lys Gly His Pro Glu Ser Leu
 85 90 95
 Leu Ser Asn Leu Val Ala Glu Val Leu Arg Gln Ala Ala Thr Lys Val
 100 105 110
 Gln Asp Lys Pro Ala Asp Met Gly Leu Val Asn Met Gly Gly Leu Arg
 115 120 125
 Asn Ile Leu Pro Ala Gly Asp Ile Thr Val Gly Thr Val Tyr Glu Ile
 130 135 140
 Leu Pro Phe Glu Asn Ser Leu Cys Val Met Lys Met Lys Gly Thr His
 145 150 155 160
 Leu Lys Ala Leu Leu Thr Ser Ile Ala Ser Leu Lys Gly Glu Gly Val
 165 170 175
 Ser Gly Ile Arg Met Glu Ile Thr Lys Asp Gly Lys Leu Leu Asn Ala
 180 185 190
 Thr Val Gly Gly Gln Pro Ile Asp Asp Asn Lys Leu Tyr Thr Val Ala
 195 200 205
 Thr Ile Asp Tyr Leu Ala Asp Gly Asn Gly Ser Met Glu Ala Phe Leu
 210 215 220
 Gln Ala Asp Asp Arg Val Cys Pro Glu Gly Ala Thr Leu Arg Gly Leu
 225 230 235 240
 Phe Leu Asp Tyr Val Arg Gln Gln Thr Ala Ala Gly Lys Lys Ile Thr
 245 250 255
 Ser Ala Leu Asp Gly Arg Ile Thr Val Lys
 260 265

<210> 10168

<211> 724

<212> PRT

<213> B.fragilis

<400> 10168

Ser Thr Met Leu Lys Arg Thr Phe Ile Leu Ile Gly Leu Val Leu Ser

1	5	10	15												
Phe	Cys	Ser	Leu	Pro	Ala	Gln	Glu	Leu	Ile	Gln	Ile	Thr	Thr	Arg	Asn
20								25				30			
Thr	Ala	Leu	Val	Phe	Arg	Val	Ala	Asn	Gln	Ser	Leu	Arg	Gln	Val	Tyr
35								40				45			
Tyr	Gly	Pro	Arg	Leu	Ala	Asp	Thr	Asp	Val	Leu	Gln	Lys	Gln	Gly	Asn
50							55				60				
Asn	Phe	Pro	Ala	Tyr	Ser	Thr	Tyr	Gly	Met	Gly	Glu	Gln	Asn	Glu	Val
65							70			75			80		
Ala	Leu	His	Ala	Val	His	Ala	Asp	Gly	Asn	Thr	Ser	Thr	Leu	Leu	Asn
85								90				95			
Phe	Glu	Asn	Val	Lys	Gln	Glu	Ser	Pro	Glu	Pro	Gly	Ile	Thr	Leu	Thr
100								105				110			
Thr	Ile	Ser	Leu	Lys	Asp	Pro	Leu	Tyr	Pro	Phe	Gln	Val	Lys	Leu	Phe
115								120				125			
Tyr	Lys	Ala	Tyr	Glu	Glu	Ser	Asp	Leu	Ile	Glu	Gln	Trp	Thr	Ile	Tyr
130							135				140				
Gln	His	Thr	Glu	Lys	Lys	Pro	Val	Thr	Leu	Tyr	Gln	Phe	Ala	Ser	Ala
145							150				155			160	
Gln	Leu	Ser	Phe	Lys	Ser	Ser	Ser	Tyr	Arg	Leu	Thr	His	Phe	Ala	Gly
165								170				175			
Asp	Trp	Ala	Gly	Glu	Cys	Asn	Met	Ser	Glu	Val	Glu	Leu	Thr	Glu	Gly
180								185				190			
Ile	Lys	Val	Ile	Asp	Ser	Lys	Leu	Gly	Thr	Arg	Ala	Thr	Phe	Phe	Ala
195								200				205			
His	Pro	Met	Cys	Leu	Leu	Ser	Leu	Asn	Gly	Arg	Met	Thr	Glu	Asp	Asn
210								215				220			
Gly	Glu	Val	Ile	Gly	Met	Ala	Leu	Ala	Trp	Pro	Ala	Asn	Phe	Lys	Leu
225								230				235			240
Glu	Phe	Glu	Lys	Asn	Asn	Asn	Gln	Glu	Leu	Arg	Val	Leu	Ala	Gly	Met
245								250				255			
Asn	Pro	Tyr	Ala	Ser	His	Tyr	Lys	Leu	Lys	Lys	Gly	Asp	Val	Phe	Gln
260								265				270			
Thr	Pro	Ser	Phe	Leu	Tyr	Thr	Tyr	Ser	Thr	Lys	Gly	Asn	Gly	Gln	Val
275								280				285			
Ser	Arg	Asn	Phe	His	Arg	Trp	Ala	Arg	Lys	Tyr	Gly	Leu	Arg	His	Gly
290								295				300			
Glu	Asn	Ser	Arg	Tyr	Thr	Leu	Met	Asn	Asn	Trp	Glu	Ala	Thr	Tyr	Phe
305								310				315			320
Asn	Phe	Asn	Glu	Pro	Lys	Leu	Lys	Ser	Ile	Ile	Glu	Asp	Ala	Ala	Gly
325								330				335			
Met	Gly	Phe	Glu	Leu	Phe	Leu	Leu	Asp	Asp	Gly	Trp	Phe	Gly	Gln	Lys
340								345				350			
His	Pro	Arg	Asn	Asn	Asp	Asp	Ala	Gly	Leu	Gly	Asp	Trp	Val	Val	Asn
355								360				365			
Lys	Glu	Lys	Leu	Pro	Asn	Gly	Leu	Gly	Trp	Leu	Val	Lys	Gln	Cys	Thr
370								375				380			
Asp	Asn	Asp	Ile	Lys	Phe	Gly	Ile	Trp	Val	Glu	Pro	Glu	Met	Val	Asn
385								390				395			400
Pro	Gln	Ser	Glu	Leu	Phe	Glu	Lys	His	Pro	Asp	Trp	Val	Ile	Gln	Gln
405								410				415			
Pro	Gly	Arg	Glu	His	Ile	Leu	Phe	Arg	Arg	Gln	Leu	Val	Leu	Asp	Leu
420								425				430			
Ser	Asn	Pro	Glu	Val	Gln	Glu	Phe	Val	Tyr	Lys	Ser	Val	His	Asp	Ile
435								440				445			
Leu	Lys	Asp	Asn	Pro	Gln	Ile	Ala	Phe	Val	Lys	Trp	Asp	Cys	Asn	Arg
450								455				460			
Ala	Val	Thr	Asn	Pro	Gly	Ser	Thr	Tyr	Leu	Pro	Ala	Asp	Glu	Gln	Ser
465								470				475			480

His Ile Trp Ile Glu Tyr Gly Arg Gly Leu Leu Asn Val Phe Lys Lys
 485 490 495
 Val Arg Asp Ser His Pro Asp Val His Phe Met Leu Cys Ser Gly Gly
 500 505 510
 Gly Gly Arg Leu Asp Tyr Gly Ser Leu Arg Tyr Phe Glu Glu Tyr Trp
 515 520 525
 Pro Ser Asp Asn Thr Asp Ala Leu Gln Arg Ile Leu Ile Gln Trp Gly
 530 535 540
 Asn Ser Gln Phe Phe Pro Ser Ile Ala Met Cys Cys His Val Ser Ala
 545 550 555 560
 Ser Pro Asn His Gln Thr Gly Arg Thr Thr Pro Leu Lys Phe Arg Phe
 565 570 575
 Asp Val Ala Met Gln Gly Ala Leu Gly Met Asp Leu Gln Pro Ser Thr
 580 585 590
 Met Asn Glu Lys Glu Val Ile Phe Ala Lys Glu Ala Ile Lys Thr Tyr
 595 600 605
 Glu Ser Ile Arg Asn Ile Val Phe Thr Gly Asp Leu Tyr Arg Ile Leu
 610 615 620
 Ser Pro Tyr Glu Gly Asn Arg Thr Ser Met Met Tyr Val Leu Pro Asp
 625 630 635 640
 Lys Ser Arg Ala Val Phe Tyr Ala Tyr Gln Leu Lys Ser His Ile Gly
 645 650 655
 Glu Val Ser Ala Pro Met Arg Phe Lys Gly Leu Ser Pro Asp Lys Lys
 660 665 670
 Tyr Asn Val Lys Glu Leu Asn Ile Tyr Pro Gly Ser Arg Ala Ala Thr
 675 680 685
 Gly Ser Ala Asn Gly Gln Ser Phe Ser Gly Asp Phe Leu Met Asn Gln
 690 695 700
 Gly Leu Pro Ile Gly Leu Ser Gly Asp Tyr Ser Ser Ala Val Ile Glu
 705 710 715 720
 Leu Glu Gln Gln

<210> 10169

<211> 1029

<212> PRT

<213> B.fragilis

<400> 10169

Val Leu Ile Gly Leu Gly Ile Ser Ala Gly Leu Leu Ser Pro Asn Tyr
 1 5 10 15
 Val Phe Ala Thr Ser Leu Glu Thr Tyr Glu Asn Gln Ser Val Ala Ala
 20 25 30
 Val Gln Gln Ala Arg Lys Ile Thr Gly Thr Leu Thr Asp Ala Val Gly
 35 40 45
 Glu Pro Ile Ile Gly Ala Thr Val Leu Glu Lys Gly Asn Pro Ser Asn
 50 55 60
 Gly Thr Ile Thr Asp Ile Asn Gly Lys Phe Ser Val His Pro
 65 70 75 80
 Asn Ala Val Ile Ser Ile Ser Tyr Ile Gly Tyr Ile Thr Gln Asn Ile
 85 90 95
 Lys Ile Thr Asn Gln Thr Ser Leu Lys Val Val Met Met Asp Asp Thr
 100 105 110
 Gln Ala Leu Glu Glu Val Val Val Val Gly Tyr Gly Ser Gln Lys Lys
 115 120 125
 Ala Asn Leu Thr Gly Ala Val Ser Ser Val Lys Met Asp Glu Val Leu
 130 135 140
 Gly Asp Arg Pro Ile Leu Asn Ala Ser Asp Ala Leu Gln Gly Ala Val
 145 150 155 160

Pro Gly Leu Phe Val Ser Asn Gly Gly Asn Ala Pro Gly Thr Ser Lys
 165 170 175
 Ser Phe Gln Ile Arg Gly Ala Tyr Ser Val Gly Val Lys Asn Ser Asp
 180 185 190
 Gly Ser Tyr Gly Asn Thr Ile Lys Pro Leu Val Leu Ile Asp Asn Val
 195 200 205
 Glu Gly Asp Leu Asp Met Val Asn Pro Glu Asp Ile Glu Ser Ile Ser
 210 215 220
 Val Leu Lys Asp Ala Ala Ser Ala Ala Ile Tyr Gly Ala Arg Ala Ala
 225 230 235 240
 Gly Gly Val Ile Val Val Thr Thr Lys Arg Pro Lys Gly Ala Ala Lys
 245 250 255
 Phe Ser Leu Asn Tyr Asn Asn Asn Phe Ala Phe Gly Thr Ala Val Asn
 260 265 270
 Leu Pro Lys Gln Ala Pro Leu Met Asp Tyr Leu Gln Ala Tyr Leu Asp
 275 280 285
 Cys Gly Tyr Ser Asp Ala Tyr Trp Ser Leu Gly Ser Pro Ser Val Ser
 290 295 300
 Lys Trp Met Glu Tyr Leu Ser Glu Tyr Gln Lys Asn Pro Ser Ala Phe
 305 310 315 320
 Asn Thr Val Gly Asp Gly Ile Tyr Met Asp Glu Ser Gly Val Pro Tyr
 325 330 335
 Tyr Leu Asn Glu Lys Asp Leu Tyr Lys Asn Phe Met Glu Thr Ser Phe
 340 345 350
 Gln Met Thr His Asn Ile Ser Ala Ser Gly Gly Thr Asp Lys Leu Arg
 355 360 365
 Tyr Arg Ile Ser Gly Gly Tyr Thr Ser Asn Asp Gly Val Leu Val Ser
 370 375 380
 Asp Arg Asp Lys Phe Glu Arg Met Asn Ile Asn Thr Phe Ile Ser Ala
 385 390 395 400
 Asp Val Thr Asn Trp Phe Thr Gln Glu Val Thr Met Ser Tyr Ala His
 405 410 415
 Ser Leu Gln Thr Ser Pro Gly Gly Met Gly Val Tyr Asn Thr Arg
 420 425 430
 Leu Val Ser Tyr Tyr Pro Glu Gly Asp Leu Pro Ala Ser Val Asn Thr
 435 440 445
 Leu Ala Asn Glu Asp Leu Pro Leu Phe Thr Pro Arg Asn Gln Ile Leu
 450 455 460
 Leu Ser Asn Pro Val Asn Asn Asn Asp Asn Pro Arg Ile Phe Leu
 465 470 475 480
 Lys Ser Ile Leu Lys Pro Leu Lys Gly Leu Glu Ala Val Phe Glu Tyr
 485 490 495
 Thr Phe Asp Lys Asn Ile Tyr Asp Tyr His Trp Tyr Thr Gly Gln Tyr
 500 505 510
 Asp Tyr Thr Thr Ile Gln Gly Gly Ser Ser Lys Ser Phe Val Asp Asp
 515 520 525
 Tyr Leu Arg Lys Tyr Lys Gln His Thr Asn Tyr Asn Ala Ile Asn Val
 530 535 540
 Tyr Ala Thr Tyr Ser Lys Lys Phe Gly Asp His Asn Phe Lys Val Met
 545 550 555 560
 Ala Gly Phe Asn Gln Glu Ser Ser Tyr Gln Glu Thr Leu Asp Ala Tyr
 565 570 575
 Ser Tyr Asn Gln Ala Val Ile Asp Val Pro Ala Met Gly Ser Gly Thr
 580 585 590
 Gly Thr Ile Lys Ala Thr Asp Ser Tyr Ser Glu Tyr Ala Val Arg Gly
 595 600 605
 Gly Phe Phe Arg Val Asn Tyr Asn Tyr Gln Asp Lys Tyr Leu Leu Glu
 610 615 620
 Val Asn Gly Arg Tyr Asp Gly Ser Ser Lys Phe Pro Lys Ser Ser Arg

625	630	635	640
Phe	Gly	Phe	Phe
Pro	Ser	Val	Ser
Ala	Gly	Trp	Gln
Ile	Ala	Ile	Gln
Glu			
645		650	655
Lys	Phe	Met	Glu
Ser	Thr	Arg	Asn
Trp	Leu	Asp	Gly
Leu			
Lys	Ile	Arg	
660		665	670
Ala	Ser	Tyr	Gly
Val	Ile	Gly	Asn
Gln	Asn	Val	Asn
Asn	Tyr	Thr	Phe
675		680	685
Thr	Pro	Thr	Met
Ser	Val	Ser	Asn
Lys	Ser	Thr	Ser
Trp	Ile	Ile	Asp
690		695	700
Asn	Thr	Tyr	Val
Thr	Ser	Ile	Ser
Ser	Leu	Pro	Ala
Leu			Leu
Val			Val
Ser			Gln
705		710	720
Asn	Phe	Thr	Trp
Glu	Lys	Val	Gly
Thr	Val	Asn	Val
Gly	Leu	Asp	Ile
725		730	735
Asn	Leu	Phe	Asn
Asn	Arg	Leu	Asn
Gly	Val	Phe	Glu
Trp	Tyr	Trp	Tyr
Gln	Arg		
740		745	750
Asn	Thr	Asn	Gly
Met	Leu	Ala	Pro
Gly	Val	Gln	Leu
Leu			Pro
Ala			Ala
Val			Val
Gly			Val
755		760	765
Gly	Ala	Ser	Ala
Pro	Tyr	Gln	Asn
Asn	Thr	Ala	Asp
Met	Asp	Asp	Arg
Arg	Thr	Arg	Gly
Gly	770	775	780
Trp	Glu	Leu	Ser
Leu	Asn	Trp	Arg
Asp	Gly	Arg	Asp
Gln	785	790	795
Ile			800
Gly			
Arg	Leu	Gly	Phe
Leu	Asn	Leu	Ser
Asp	Tyr	Asp	Tyr
Tyr	Lys	Ser	Lys
Ile			
Ser			
Thr	Lys	Ile	Thr
Lys			Lys
Ile			
Asp			
Asp	Asp	Asn	Ala
Asn	Thr	Thr	Lys
Thr	Leu	Ser	Ser
Ser	Phe	Tyr	Tyr
Tyr	790	795	800
Ile			
Asp			
Asp	Asp	Asn	Ala
Asn	Thr	Thr	Lys
Thr	Leu	Ser	Ser
Ser	Phe	Tyr	Tyr
Tyr	805	810	815
Ile			
Asp			
Asp	Asp	Asn	Ala
Asn	Thr	Thr	Lys
Thr	Leu	Ser	Ser
Ser	Phe	Tyr	Tyr
Tyr	820	825	830
Ile			
Val			
Met			
Gly			
Glu			
Ile			
Trp			
Gly			
Tyr			
Ile			
Ala			
Asp			
Gly			
835		840	845
Ile			
Asp			
Asp	Phe	Glu	Asp
Asp	Thr	Ser	Ser
Ser	Trp	Lys	Leu
Lys			
Ile			
Gly			
850		855	860
Ile			
Asp			
Ser	Ile	Asn	Gly
Tyr	Asn	Val	Arg
Asp	Pro	Gly	Asp
Gly	865	870	880
Asn			
Asp			
Asp	Leu	Ser	Ser
Glu			
Ser			
Thr			
Asn			
Val			
Ile			
Thr			
Ser			
Gly			
885		890	895
Ile			
Asp			
Asp	Phe	Asp	Asn
Asn	Thr	Thr	Pro
Pro	Leu	Ser	Tyr
Gly	900	905	910
Ile			
Asp			
Arg	Tyr	Gln	Tyr
Gly	Ile	Asn	Leu
Tyr	Asn	Tyr	Ala
Ile	Asn	Gly	Phe
Asp	915	920	925
Asp			
Leu	Asn	Val	Ile
Ile	Leu	Gln	Gly
Gly	Thr	Lys	Arg
Lys	Asp	Tyr	Trp
Ile	930	935	940
Ser			
Asn			
Asn	Val	Leu	Thr
Phe	Pro	Met	Asn
Pro	Gly	Asp	Asn
Asn	Asn	Phe	Ile
Phe	Ile	Pro	Leu
945		950	955
Phe			
Asp			
Gly	Leu	Ser	Asp
Tyr	Trp	Met	Pro
Ile	Asp	Lys	Asp
Asp	Asp	Pro	Asn
Asp	Asp	Gly	Asp
Asp	955	970	975
Trp			
Trp	Thr	Ala	Val
Asn	Asn	Pro	Asn
Ala	Tyr	Asn	Asn
Ile	Asn	Asn	Tyr
Gly	980	985	990
Ile			
Asp			
Arg	Gly	Asn	Ser
Gly	Ser	Asn	Leu
Asn	Leu	Arg	Gln
Asn	Ser	Gly	Ser
Asn	Asn	Asn	Asn
Asn	Asn	Tyr	Leu
Asn	Asn	Asn	Ser
Asn	Asn	Asn	Tyr
Asn	Asn	Asn	Asn
Asn	Asn	Asn	Val
Asn	Asn	Asn	1010
Asn	Asn	Asn	1015
Asn	Asn	Asn	1020
Phe	Asn	Asn	
Thr	Asn	Asn	
Thr	Asn	Asn	
Gly	Asn	Asn	
Leu			
1025			

<210> 10170

<211> 202

<212> PRT

<213> B.fragilis

<400> 10170

Ile Ile Asp Ile Phe Val Asp Tyr Phe Asn Leu Lys Thr Thr Ser

1	5	10	15
Met Arg Ile Lys Leu Leu Phe Leu Ile Ser Ile Leu Phe Cys Thr Gly			
20	25	30	
Ser Tyr Ala Gln Glu Thr Val Thr Glu Pro Asp Phe Ile Gly Glu Val			
35	40	45	
Leu Val Leu Asn Pro Asp Asn Ser Thr Thr Pro Leu Glu Lys Ala Thr			
50	55	60	
Val Lys Ile Lys Thr Lys Ala Asn Ala Ser Ile Tyr Leu Val Gly Met			
65	70	75	80
Gly Lys Val Lys Thr Lys Ile Asn Val Asp Gly Pro Ser Ala Gln Val			
85	90	95	
Arg Leu His Gln Gly Asp Asp Phe Lys Leu Ile Val Arg Ala Val Asp			
100	105	110	
Asn Asn Thr Asp Pro Met Ser Ile Ile Asn Ile Phe Gln Phe Glu Thr			
115	120	125	
Gly Lys Lys Val Arg Lys Ala Glu Leu Ser Ser Leu Ser Thr Phe Gly			
130	135	140	
Gly Ala Ser Ser Asn Asn Leu Glu Leu Leu Pro Tyr Thr Ala Lys Lys			
145	150	155	160
Tyr Gly Glu Ser Ser Tyr Leu Ile Thr Leu Lys Glu Lys Pro Val Gly			
165	170	175	
Glu Tyr Gly Ile Thr Val Arg Asn Pro Asn Ser Leu Asp Glu Lys Asn			
180	185	190	
Ile Ile Val Ala Ser Phe Gly Ile Asp Gln			
195	200		

<210> 10171

<211> 538

<212> PRT

<213> B.fragilis

<400> 10171

Asp Arg Phe Ile Ser Gly Ser Leu Gly Thr Glu Ser Ile Lys Gly Glu			
1	5	10	15
Thr Ser Gly Gly Pro Leu Ser Glu Tyr Thr Arg Val Tyr Arg Ile Lys			
20	25	30	
Arg Arg Tyr Arg Asp Asn Leu Asn Ser Ser Phe Asn Lys Asn Lys Asn			
35	40	45	
Asp Met Arg Asn Ile Gln Arg Thr Ile Leu Trp Ile Ala Gly Leu Leu			
50	55	60	
Phe Cys Leu Pro Ser Ser Ser Asn Pro Val Val Ile Gly Asn Ser			
65	70	75	80
Arg Phe Thr Phe Ile Thr Asp His Leu Val Arg Met Glu Tyr Ala Gln			
85	90	95	
Gln Gly Lys Phe Leu Asn Asp Ser Thr Leu Phe Ala Val Asp Arg Thr			
100	105	110	
Pro Arg Cys Thr Glu Val Lys Val Glu Arg Lys Glu Gly Asn Arg Tyr			
115	120	125	
Ile Met Thr Thr Pro Ala Met Arg Ile Glu Tyr Tyr Asn Asp Gly Phe			
130	135	140	
Pro Phe Gly Gln Thr Asn Leu Phe Val Tyr Phe Arg Asn Gly Asp Ser			
145	150	155	160
Pro Lys Glu Lys Arg Trp Tyr Ile Ala Ser Arg Gln Ser Arg Asn Leu			
165	170	175	
Leu Gly Ala Val Thr Thr Leu Asp Asp Val Glu Gly Pro Ile Asp Arg			
180	185	190	
Gln Glu Gly Leu Leu Ser Arg Asp Gly Trp Tyr Leu Ile Asn Asp Thr			
195	200	205	
Gly Lys Glu Val Leu Lys Asn Gly Trp Val Ala Thr Arg Asp Arg Asn			

210	215	220
His Val Gln Asp Leu Tyr Leu Phe Val Tyr Gly Asn Asp Tyr Lys Ala		
225	230	235
Ala Leu Lys Ser Leu Gln Ala Val Ser Gly Pro Ser Pro Met Thr Arg		240
245	250	255
Lys Tyr Val His Gly Ser Trp Tyr Cys Arg Trp Trp Asn Tyr Thr Asp		
260	265	270
Glu Asp Tyr Arg Gln Leu Val Arg Glu Tyr Arg Glu His Asp Phe Pro		
275	280	285
Leu Asp Ile Met Val Phe Asp Met Gly Trp His Thr Gln Asn Ala Lys		
290	295	300
Val Gly Thr Gly His Ala Gly Thr Arg Gly Trp Thr Gly Tyr Ser Trp		
305	310	315
Asn Arg Lys Leu Ile Pro Glu Pro Glu Lys Leu Ile Lys Asp Phe Lys		320
325	330	335
Asp Asp His Ile Tyr Val Val Leu Asn Glu His Pro His Asp Gly Ile		
340	345	350
Arg Pro His Glu Asp Ser Tyr Gln Ala Phe Val Arg Asp Leu Gly Val		
355	360	365
Asp Thr Gln Gln Thr Gly Val Pro Leu Phe Asp Ala Gly Asn Arg Asp		
370	375	380
Tyr Met Asn Ala Phe Met Lys His Ala His Gln Glu Ser Asp Ser Met		
385	390	395
Gly Val Ala Phe Trp Trp Leu Asp Trp Gln Gln Asp Tyr Leu Tyr Pro		400
405	410	415
Leu Val Arg Gly Thr Asn Met Lys His Leu Pro Trp Met Asn Arg Ile		
420	425	430
Tyr Tyr Asn Tyr Ser Ser Gly Asn His Leu Arg Gly Ala Gly Phe Ser		
435	440	445
Arg Trp Ala Gly Trp Gly Asp His Arg His Pro Ile Gln Phe Ser Gly		
450	455	460
Asp Ala Val Gly Asn Trp Asp Leu Leu Arg Phe Glu Val Asp Leu Thr		
465	470	475
Thr Thr Ser Gly Asn Ala Gly Cys Phe Phe Trp Ala His Asp Leu Gly		
485	490	495
Gly Phe Tyr Asp Gly Thr Asp Pro Glu Leu Tyr Thr Arg Trp Thr Gln		
500	505	510
Phe Gly Leu Leu Asn Ser Ser Leu Arg Ile His Ser Val Tyr Asp Glu		
515	520	525
Asn Ser Thr Ala Val Pro Gly Ser Gly Ala		
530	535	

<210> 10172

<211> 436

<212> PRT

<213> B.fragilis

<400> 10172

Cys Leu Thr Ile Arg Gln Gly Trp Ile His Glu Ile Lys Thr Asp Ile		
1	5	10
Asn Met Ile Asp Ile Trp Gln Glu Ile Tyr Gly Thr Ile Lys Arg Asn		15
20	25	30
Lys Leu Arg Thr Leu Leu Thr Gly Phe Ala Val Ala Trp Gly Ile Phe		
35	40	45
Met Leu Ile Val Leu Leu Gly Ala Gly Asn Gly Leu Ile His Ala Phe		
50	55	60
Glu Lys Ser Ser Ser Ala Arg Ala Leu Asn Ser Ile Lys Ile Tyr Pro		
65	70	75
Gly Trp Thr Gly Lys Pro Tyr Asp Gly Leu Lys Glu Gly Arg Arg Ile		80

85	90	95													
Gln	Leu	Asp	Asn	Lys	Asp	Leu	Asp	Ala	Thr	Met	Glu	His	Phe	Ser	Asp
100															110
Asn	Ile	Ile	Ser	Val	Gly	Ala	Ser	Gln	Trp	Gln	Ser	Asn	Val	Asn	Leu
115															125
Ser	Tyr	Gly	Gln	Glu	Tyr	Val	Asn	Leu	Ser	Leu	Glu	Gly	Val	Tyr	Pro
130															140
Asn	Phe	Thr	Glu	Val	Glu	Ser	Val	Lys	Ser	Thr	Asp	Gly	Arg	Phe	Ile
145															160
Asn	Asp	Ile	Asp	Leu	Lys	Glu	Arg	Arg	Lys	Val	Ile	Val	Leu	His	Thr
165															175
Lys	Thr	Ala	Glu	Ile	Leu	Phe	Gly	Lys	Ser	Lys	Thr	Glu	Pro	Ile	Gly
180															190
Lys	Phe	Val	Asn	Ala	Gly	Gly	Val	Ser	Tyr	Gln	Val	Val	Gly	Leu	Tyr
195															205
Thr	Asp	Pro	Gly	Asp	Gln	Gly	Ser	Ser	Glu	Ala	Tyr	Ile	Pro	Phe	Ser
210															220
Thr	Leu	Gln	Val	Ile	Tyr	Asn	Lys	Gly	Asp	Lys	Leu	Asn	Asn	Leu	Thr
225															240
Phe	Thr	Thr	Lys	Gly	Leu	Thr	Thr	Ile	Glu	Thr	Asn	Glu	Ala	Phe	Glu
245															255
Ala	Ala	Tyr	Arg	Lys	Val	Met	Gly	Ala	Lys	His	Arg	Phe	Asp	Pro	Ser
260															270
Asp	Asn	Ser	Ala	Leu	Trp	Ile	Trp	Asn	Arg	Phe	Thr	Asn	Tyr	Leu	Gln
275															285
Ser	Gln	Asn	Ala	Met	Gly	Ile	Leu	Arg	Thr	Ala	Ile	Trp	Val	Ile	Gly
290															300
Ile	Phe	Thr	Leu	Leu	Ser	Gly	Ile	Val	Gly	Val	Ser	Asn	Ile	Met	Leu
305															320
Ile	Thr	Val	Lys	Glu	Arg	Thr	Arg	Glu	Phe	Gly	Ile	Arg	Lys	Ala	Leu
325															335
Gly	Ala	Lys	Pro	Phe	Ser	Ile	Leu	Trp	Leu	Ile	Ile	Val	Glu	Ser	Val
340															350
Thr	Ile	Thr	Thr	Leu	Phe	Gly	Tyr	Ile	Gly	Met	Val	Ala	Gly	Ile	Ala
355															365
Ala	Thr	Glu	Trp	Met	Asn	Lys	Val	Ala	Gly	Glu	Gln	Thr	Val	Asp	Val
370															380
Gly	Met	Phe	Ser	Glu	Thr	Val	Phe	Leu	Asn	Pro	Thr	Val	Asp	Ile	Ser
385															400
Ile	Ala	Ile	Gln	Ala	Thr	Leu	Thr	Leu	Val	Val	Ala	Gly	Thr	Leu	Ala
405															415
Gly	Phe	Phe	Pro	Ala	Lys	Lys	Ala	Val	Ser	Ile	Arg	Pro	Ile	Glu	Ala
420															430
Leu	Arg	Ala	Asp												
435															

<210> 10173

<211> 280

<212> PRT

<213> B.fragilis

<400> 10173

Ser	Arg	Leu	Ile	Met	Arg	Val	Asp	Met	Asp	Thr	Cys	Glu	Glu	Ile	Leu
1															15

Val	Thr	Ile	Thr	Arg	Asn	Lys	Thr	Arg	Ser	Leu	Leu	Thr	Ala	Phe	Gly
															30

Val	Phe	Trp	Gly	Ile	Phe	Met	Leu	Val	Ala	Leu	Met	Gly	Gly	Gly	Gln
															45

Gly	Met	Gln	Glu	Met	Met	Gln	Ala	Glu	Phe	Glu	Gly	Phe	Ala	Thr	Asn
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

B. fragilis

50	55	60
Ser Gly Phe Met Ala Ser Gln Lys Thr Gly Glu Ala Tyr Lys Gly Phe		
65	70	75
Arg Lys Gly Arg Tyr Trp Asp Ile Glu Asn Ala Asp Ile Glu Arg Ile		80
85	90	95
Arg Lys Lys Val Lys Asp Ile Asp Val Ile Thr Pro Ser Ile Ala Arg		
100	105	110
Trp Gly Ser Thr Ala Ile Tyr Gly Glu Lys Lys Tyr Asp Cys Ser Val		
115	120	125
Lys Gly Leu Tyr Pro Asp Tyr Ala Lys Ile Glu Asn Gln Asp Met Ala		
130	135	140
Tyr Gly Arg Phe Ile Asn Asp Val Asp Val Arg Glu Gly Arg Lys Val		
145	150	155
Cys Val Ile Gly Lys Arg Val Tyr Glu Ser Leu Phe Asn Pro Gly Glu		
165	170	175
Asp Pro Cys Gly Lys Tyr Val Arg Val Asp Gly Ile Tyr Tyr Gln Val		
180	185	190
Ile Gly Met Cys Val Ser Glu Gly Asn Met Asn Ile Gln Gly Arg Ala		
195	200	205
Ser Glu Ala Val Val Leu Pro Phe Ser Thr Met Gln Gln Ala Tyr Asn		
210	215	220
Met Gly Lys Arg Ile Asp Val Ile Cys Tyr Thr Val Lys Pro Gly Lys		
225	230	235
Lys Val Ser Asp Leu Glu Pro Glu Ile Glu Ala Ile Leu Lys Glu Ala		
245	250	255
His Tyr Ile Ser Pro Asp Asp Lys Gln Ala Val Met Lys Leu Asn Ala		
260	265	270
Gly Gly His Val Leu Asn Asp Gly		
275	280	

<210> 10174

<211> 183

<212> PRT

<213> *B.fragilis*

<400> 10174

Glu Lys Lys Ile Ala Thr Gln Glu Val Trp Leu Pro Gly Gly Thr Asp
 1 5 10 15
 Trp Tyr Asn Phe Phe Thr Gly Glu Arg Gln Glu Gly Gly Gln Val Ile
 20 25 30
 Lys Thr Lys Ser Pro Leu Glu Gln Phe Pro Leu Phe Ile Lys Gly Gly
 35 40 45
 Cys Pro Leu Pro Met Gln Pro Tyr Thr Glu Arg Met Cys Ser Thr Pro
 50 55 60
 Leu Thr Glu Leu Ile Val Arg Cys Tyr Pro Gly Lys Glu Gly Ala Asn
 65 70 75 80
 Asn Thr Tyr Ile Leu Tyr Glu Asp Asp Gly Leu Thr Gln Asp Tyr Leu
 85 90 95
 Gln Gly Lys Tyr Ala Thr Thr Arg Leu Asn Tyr Gln Lys Ser Gly Gly
 100 105 110
 Gln Thr Ile Ile Thr Val Ser Pro Val Glu Gly Thr Tyr Glu Gly Gln
 115 120 125
 Pro Arg Lys Arg Ala Tyr Arg Ile Glu Leu Pro Gly Ile Pro Val Gln
 130 135 140
 Ala Arg Val Ser Val Asn Gly Lys Lys Ala Arg Thr Thr Pro Asn Gln
 145 150 155 160
 Glu Leu Asn Gly Val Ile Val Pro Ile Lys Val Met Asp Ile His Lys
 165 170 175
 Pro Ile Val Ile Lys Ile Gln

<210> 10175

<211> 116

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (92)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10175

Pro	Trp	Arg	Ile	Leu	Arg	Arg	Asn	Arg	Pro	Gly	Thr	Leu	His	Ser	Leu
1				5					10						15
Asp	Thr	Val	Arg	Ile	Ala	Glu	Phe	Phe	Thr	Pro	His	Pro	Leu	Gly	Val
				20				25							30
Arg	Arg	Lys	Leu	Asp	Arg	Arg	Pro	Trp	Leu	Trp	Gly	Val	Glu	Ala	Glu
				35				40					45		
Lys	Ala	Met	His	Arg	Ile	Tyr	His	Leu	Arg	Ser	Gln	Leu	Met	Pro	Tyr
				50				55				60			
Ile	Tyr	Ser	Ser	Val	Arg	Gln	Cys	His	Thr	Asp	Met	Leu	Pro	Leu	Asn
				65				70			75				80
Arg	Gly	Met	Tyr	Ile	Glu	Tyr	Pro	Asp	Glu	Glu	Xaa	Ala	Tyr	Gln	Tyr
				85				90					95		
Pro	Gly	Gln	Phe	Leu	Phe	Gly	Asp	Leu	Leu	Leu	Gly	Ala	Pro	Ile	Thr
				100				105							110
Ala	Lys	Gly	Glu												
				115											

<210> 10176

<211> 291

<212> PRT

<213> B.fragilis

<400> 10176

Ile	Met	Ile	Phe	Pro	Ile	Asn	Lys	Lys	His	Thr	Phe	Ser	Lys	Glu	
1				5				10						15	
Lys	Thr	Leu	Leu	Thr	Phe	Phe	Phe	Ile	Leu	Phe	Ile	Ser	Phe	Ala	
				20				25						30	
Phe	Gly	Gln	Asp	Lys	Lys	Leu	Ile	Leu	Leu	Gln	Thr	Ser	Asp	Val	
				35				40				45			
His	Ser	Arg	Leu	Glu	Pro	Ile	Asn	Gln	Glu	Gly	Asp	Arg	Asn	Tyr	Asp
				50				55				60			
Lys	Gly	Gly	Phe	Val	Arg	Arg	Ala	Thr	Phe	Val	Lys	Glu	Phe	Arg	Lys
				65				70			75				80
Glu	His	Pro	Asp	Met	Leu	Leu	Phe	Asp	Cys	Gly	Asp	Ile	Ser	Gln	Gly
				85				90							95
Thr	Pro	Tyr	Tyr	Asn	Met	Phe	Gln	Gly	Glu	Val	Glu	Val	Lys	Met	Met
				100				105					110		
Asn	Glu	Met	Lys	Tyr	Asp	Ala	Met	Thr	Ile	Gly	Asn	His	Glu	Phe	Asp
				115				120					125		
Phe	Asp	Leu	Asp	Asn	Met	Ala	Arg	Leu	Phe	Arg	Met	Ala	Asp	Phe	Pro
				130				135					140		
Val	Val	Cys	Ala	Asn	Tyr	Asp	Val	Ser	Ala	Thr	Val	Leu	Lys	Asp	Leu
				145				150				155			160
Val	Lys	Pro	Tyr	Val	Val	Phe	Glu	Arg	Asp	Gly	Val	Lys	Ile	Gly	Val
				165				170					175		
Leu	Gly	Leu	Gly	Cys	Gln	Leu	Glu	Gly	Met	Val	Gln	Ala	Asn	Lys	Cys

180	185	190
Val Gly Val Val Tyr Asn Asp Pro Val Thr Val Ala Asn Glu Val Ala		
195	200	205
Ala Leu Leu Lys Glu Lys Glu Gly Cys Asp Val Val Val Cys Leu Ser		
210	215	220
His Leu Gly Val Gln Tyr Asp Glu Asn Gln Leu Ile Pro Lys Thr Arg		
225	230	235
Asn Ile Asp Val Val Leu Gly Gly His Ser His Thr Phe Met Lys Gly		
245	250	255
Pro Lys Thr Leu Leu Asn Met Asp Gly Lys Asn Val Ser Leu Met His		
260	265	270
Thr Gly Lys Ser Gly Ile Tyr Val Gly Gln Met Asp Leu Thr Leu Glu		
275	280	285
Lys Lys Lys		
290		

<210> 10177

<211> 114

<212> PRT

<213> B.fragilis

<400> 10177

Met Asn Asn Ser Lys Ile Ile Asn Val Arg Leu Met Lys Lys Val Leu			
1	5	10	15
Val Leu Val Leu Ser Phe Leu Ser Val Thr Ala Phe Ala Gln Asn Ile			
20	25	30	
Thr Val Lys Gly Ile Val Lys Asp Gly Thr Gly Glu Pro Ile Ile Gly			
35	40	45	
Gly Ser Val Leu Val Lys Gly Ser Ser Ile Gly Thr Val Thr Asp Val			
50	55	60	
Asp Gly Asn Tyr Thr Leu Ser Asn Val Pro Ala Asp Gly Val Leu Glu			
65	70	75	80
Phe Ser Tyr Ile Gly Met Lys Lys Gln Asp Val Lys Val Ser Gly Lys			
85	90	95	
Thr Val Ile Asn Val Val Leu Gln Glu Asp Thr Gln Ile Leu Asp Glu			
100	105	110	
Val Gly			

<210> 10178

<211> 118

<212> PRT

<213> B.fragilis

<400> 10178

Ala Gly Glu Pro Ala Phe Cys Asp Glu Asn Pro Ile Asp Cys His Phe			
1	5	10	15
Asp Val Lys Ser Tyr Pro Ala Gly Thr Thr Val His Asn Asn Asp Thr			
20	25	30	
Asn Ile Ile Tyr Leu Ile Phe Cys Met Lys Gly His Ala Arg Ile Thr			
35	40	45	
Ser Thr Phe Phe His Asp Glu Ile Leu Cys Ala Gly Glu Val Met Phe			
50	55	60	
Val Pro Arg Gly Ser Glu Tyr Ser Gly Val Ala Leu Ser Asp Val Thr			
65	70	75	80
Leu Leu Val His Lys Phe Asn Asn Thr Val Cys Gln Thr Glu Asn Cys			
85	90	95	
Ile Leu Ser Tyr Leu Tyr Ser His Lys Asn Ile Asp Ser Lys Ile Tyr			
100	105	110	

Cys Cys Gln Arg Arg Thr
115

<210> 10179

<211> 301

<212> PRT

<213> B.fragilis

<400> 10179

Arg Arg Gln Ala Met Met Asn Lys Phe Leu Asn Thr Lys Val Leu Tyr
1 5 10 15
Ile Phe Ile Ser Val Ile Ile Phe Ile Met Val Phe Leu Leu Val Met
20 25 30
Arg Ala Cys Ser Gln Lys Gln Pro Ile Gln Ala Val Val Thr Pro Ser
35 40 45
Asp Pro Val Val Gly Glu Glu Ile Phe Phe Ser Asp Ser Thr Ser Gly
50 55 60
Ala Arg Ile Trp Tyr Trp Glu Phe Gly Asn Asn Glu Thr Ser Thr Gln
65 70 75 80
Arg Ser Gly His His Arg Phe Lys Gln Lys Gly Val Tyr Lys Ile Arg
85 90 95
Leu Thr Val Asn Gly Asn Leu Glu Arg Tyr Phe Asp Val Arg Val Lys
100 105 110
Glu Lys Thr Asn Thr Glu Asp Leu His Leu Val His Ile Ile Ala Pro
115 120 125
Lys Glu Ala Ile Gln Gly Glu Asn Ile Ile Phe Arg Gly Glu Gly His
130 135 140
Asp Glu Gln Trp Arg Trp Glu Phe Gly Glu Thr Gly Met Ile Asp Ser
145 150 155 160
Arg Glu Lys Thr Ala Leu Tyr Ala Tyr Thr Glu Pro Gly Glu Tyr Glu
165 170 175
Val Leu Leu Asn Thr Glu Asn Thr Arg Tyr Pro Ile Arg His Arg Ile
180 185 190
Asn Ile Leu Pro Tyr Tyr Ser Glu Asn Asp Ser Thr Asp Val Met Val
195 200 205
Leu Ile Gly Leu Asp Ile Lys Glu Lys Leu Gln Asn Ile Ala Asp Gly
210 215 220
Lys Pro Phe Asn Val Asn Tyr Asn Tyr Val Val Asp Lys Tyr Phe Asn
225 230 235 240
Asn Asn Pro Asn Thr Leu Val Val Ile Asn Asn Asn Lys Tyr Asn Asp
245 250 255
Phe Tyr Ser Tyr Cys Gln Gly Leu His His Ile Gly Arg Lys Glu Thr
260 265 270
Ile Ile Gln Asn Val Ile Val Glu Thr Glu Asp Glu Glu Ser Gly Tyr
275 280 285
Ile Thr Gln Leu Thr Val Met Gln Ile Glu Lys Lys Lys
290 295 300

<210> 10180

<211> 311

<212> PRT

<213> B.fragilis

<400> 10180

Thr Gly Asn Lys Pro Met Ile Lys Thr Val Ile Thr Gln Leu Tyr Ile
1 5 10 15
Ala Phe Cys Leu Ile Cys Phe Phe Ala Cys Glu Lys Gln Lys Glu Glu
20 25 30
Phe Pro Asp Ile Arg Ile Gly Lys Glu Gly Val Val Asp Glu Leu Ser

35	40	45	
Leu Asn Lys Gln Thr Glu Lys Arg Leu Leu Leu Ser Gly Gly Asn Gly			
50	55	60	
Lys Tyr Ile Val Asn Val Glu Asn Ala Gln Ile Ala Thr Ala Asp Ile			
65	70	75	80
Ser Met Asp Thr Leu Lys Val Lys Gly Trp Leu Glu Gly Glu Thr Phe			
85	90	95	
Ala Thr Ile Ile Ser His Asp Lys Arg Ile Arg Leu Lys Ile Asn Val			
100	105	110	
Val Phe Pro Glu Leu Gly Ile Ser His Ser Val Val Gln Leu Leu Pro			
115	120	125	
Arg Phe Arg Ser Lys Phe Ile Ser Ile Ser Gly Gly Glu Leu Thr			
130	135	140	
Lys Leu Glu Glu Asp Asp Pro Ala Asp Ile Met Asp Met Lys Trp Asp			
145	150	155	160
Gly Ser Thr Gly Met Leu Glu Ile Tyr Pro Lys Tyr Glu Gly Glu Ala			
165	170	175	
Arg Val Ile Ala Ile Ser Glu Asp Ala Lys Glu Lys Lys Val Ile His			
180	185	190	
Ile Lys Val Arg Pro Glu Gly Lys Leu Glu Ile Pro Gly Trp Tyr Ser			
195	200	205	
Thr Asn Ser Ser Tyr Tyr Leu Ile Gln Asn Asn Met Val Val			
210	215	220	
Lys Arg Lys Gly Val Gly Thr Trp Ile Val Asn Ser Ala Arg Pro Tyr			
225	230	235	240
Gly Gly Gly Val Met Tyr Asn Ser Ser Tyr Ile Lys Ile Ala Pro Ile			
245	250	255	
Met Asn Pro Val Gln Gly Asp Ser Ile Asp Leu Asn Ile Leu Arg His			
260	265	270	
Gly Ser Leu Lys Pro Gln Ile Thr Glu Gly Ile His Arg Leu Tyr Val			
275	280	285	
Glu Glu Val Arg Glu Ser Glu Val Met Leu Arg Gly Arg Gly Phe Lys			
290	295	300	
Phe Leu Leu Pro Tyr Glu Lys			
305	310		

<210> 10181

<211> 281

<212> PRT

<213> B.fragilis

<400> 10181

Arg Leu Cys Lys Ser Lys Lys Arg Asn Glu Met Arg Lys Leu Phe Val			
1	5	10	15
Leu Leu Ile Ser Ile Val Val Leu Ser Ala Cys Ala Pro Val His Arg			
20	25	30	
Phe Thr Gln Leu Arg Lys Leu Pro Arg Glu Tyr Ser Asp Asn Tyr Ser			
35	40	45	
Ile Glu Gly Ile Lys Ala Pro Arg Ser Ala Ala His Arg Lys Pro Trp			
50	55	60	
Ile Val Tyr Ser Asp Arg Val Glu Asn Ala Ala Tyr Val Asn Pro Gly			
65	70	75	80
Gly Arg Val Lys Ser Ala Glu Val Gly Leu Leu Asp Thr Phe Leu Val			
85	90	95	
Ile Lys Thr Lys Gly Asp Tyr Leu Arg Leu Ile Lys Tyr Asn Pro Thr			
100	105	110	
Asn Ile Lys His Asn Arg Met Thr Gln Arg Lys Lys Ala Glu Tyr Val			
115	120	125	
Gly Trp Met His Arg Ser Arg Leu Ile Leu Ser Pro Ser Ser Ile Thr			

130	135	140
Asp Val Gln Ser Gly Leu His Asp Lys Leu Leu Thr Ala Ile Thr Asp		
145 150 155 160		
Thr Thr Ala Ile Met Gln Ser Ala Thr Tyr Phe Thr Thr Ala Asp Ser		
165 170 175		
Leu Lys Val Phe Gly Asp Pro Glu Leu Gln Asn Gln Thr Gly Val Val		
180 185 190		
Gly Ile His Ala Ile Ile Tyr Ala Leu Lys His Ser Val Asp Lys Arg		
195 200 205		
Ser Val Leu Val Ser Lys Thr Pro Ser Leu Ser Ala Asp Lys Ile Gly		
210 215 220		
Glu Gln Val Ile Gly Trp Val Pro Ala Val Met Leu Gln Glu Ile Gly		
225 230 235 240		
His Gln Val Phe Thr Gly Thr Ala Phe Ser Arg Val Pro Thr Leu Gln		
245 250 255		
Lys Thr Leu Lys Tyr Ala Pro Met Ile Tyr Pro Tyr His Thr Asp Ser		
260 265 270		
Thr Cys Ser Phe Val Ser Gly Thr Leu		
275 280		

<210> 10182

<211> 518

<212> PRT

<213> B.fragilis

<400> 10182

Pro Val Ile Asp Lys Lys Asp Asn His Val Phe Asn Ile Asn Gly Lys		
1 5 10 15		
Arg Ile Ser Tyr Thr Arg Gly Asn Gln Ile Lys Gln Glu Leu Lys Arg		
20 25 30		
Ile Asn Ile Leu Phe Ala Met Glu Gln Ser Ser Arg Leu Pro Glu Gln		
35 40 45		
Tyr Pro Met Leu Leu Asn Ala Ile Gln Asn Leu Gly Pro Phe Phe Ala		
50 55 60		
Gly Ser Gly Glu Ser Phe Ser Tyr Gln Phe Gly Ala Ala Val Ala Thr		
65 70 75 80		
Pro Arg Gly Met Glu Thr Ile Pro Leu Thr Ala Asp Tyr Glu Ile Leu		
85 90 95		
Ile Asp Arg Leu Val Lys Met Ala Ser Tyr Val Ala Asp Thr Glu Asn		
100 105 110		
Thr Pro Leu Pro Ala Trp Lys Ala Met Arg Ser Ala Leu Glu Leu Ile		
115 120 125		
Gly Asn Thr Pro Glu Ala Val Asn Leu Ile Ile Ser Val Gly Glu Thr		
130 135 140		
Gly Glu Gln Gln Glu Asn Ala Pro Ser Ser Ile Val Lys Thr Leu Asn		
145 150 155 160		
Glu Lys Asn Cys Arg Leu Leu Gly Trp Gln Leu Tyr Ala Ser Asn Asp		
165 170 175		
Asp Lys Tyr Asn Asn Tyr Val Leu Gln Leu Ser Asn Met Ile Glu His		
180 185 190		
Tyr Ala Glu Tyr Arg Thr Lys Asn Lys Arg Asn Met Ile Leu Tyr Ala		
195 200 205		
Asp Gln Phe Cys Arg Ser Asn Leu Leu Arg Glu Ala Gly Pro Asn Phe		
210 215 220		
Leu Met Leu Asp Tyr Pro Tyr Ala Ser Met Thr Gln Gly Gly Phe Leu		
225 230 235 240		
Phe Pro Glu Lys Gly Glu Thr Leu Pro Met Glu Leu Phe Ala Gly Ala		
245 250 255		
Val Asp Ser Ile Val Thr Gln Ile Lys Ala Asp His Gln Leu Leu Ser		

260	265	270	
Glu Ser Ile Asp Arg Ala Phe Ala Thr Val Gly Asn Gly		Lys Asp Arg	
275	280	285	
Leu Asp Ser Leu Leu Ile Ala Thr Tyr His Leu Pro Gln Gly Val Lys			
290	295	300	
Pro Asn Lys Glu Phe Lys Lys Ile Phe Gly Asp Val Ala Pro Ile Trp			
305	310	315	320
Tyr Arg Lys Thr Glu Arg Ile Thr Val Pro Asp Ser Leu Met Arg Tyr			
325	330	335	
Tyr Leu Leu Leu Ser Asp Pro Glu Leu Lys Gln Thr Ile Glu Arg Leu			
340	345	350	
Glu Thr Leu Cys Ala Ile Glu Val Asp Val Lys Asp Met Asn Lys Pro			
355	360	365	
Lys Lys Gly Lys Val Lys Gln Leu Cys Arg Tyr Leu Arg Glu Arg Val			
370	375	380	
Arg Pro Asp Lys Val Glu Thr Leu Gly Ala Ser Pro Ala Asn Pro Glu			
385	390	395	400
Ser Lys Ala Asp Thr Val Tyr Val Ser Thr Gly Lys Ile Arg Arg His			
405	410	415	
Leu Tyr Arg Phe Tyr Met Ser Glu Leu Arg Asn Cys Arg Ile Cys Lys			
420	425	430	
Asn Lys Arg Lys Glu Ile Arg Arg Tyr Ser Leu Ser Tyr Ala His Ser			
435	440	445	
Gln Ile Phe Gly Val Pro Ala Asn Ser Pro Val Leu Asp Asp Ile Thr			
450	455	460	
Val Lys Glu Leu Lys Lys Lys Gln Leu Thr Asp Lys Glu Leu Asp			
465	470	475	480
Gly Leu Ile Gln Tyr Phe Lys Glu Arg Lys Glu Asn Met Ala Lys Lys			
485	490	495	
Tyr Gly Glu Glu Lys Ile Thr Met Glu Gly Gln Ser Tyr Tyr Tyr Ile			
500	505	510	
Ala Ser Glu Leu Leu Pro			
515			

<210> 10183

<211> 179

<212> PRT

<213> B.fragilis

<400> 10183

Asn Arg Lys Asp Met Ser Ile Thr Pro Lys Asn Lys Ser Ser Lys Thr			
1	5	10	15
Val Ser Glu Arg Glu Arg Phe Ile Gly Phe Val Tyr Val Leu Thr Leu			
20	25	30	
Leu Ile Val Ile Thr Gly Ala Cys Gly Phe Ile Leu Phe Lys Tyr Ala			
35	40	45	
Gly Thr Arg His Ile Phe Ser Asn Lys Ile Met Val Ile Lys Lys Met			
50	55	60	
Glu Arg Gln Lys Glu Phe Gln Asn Ile Gln Ser Val Gln Ile Val Ser			
65	70	75	80
Ala Asp Thr Leu Phe Ser Arg Ile Glu Gln Phe Glu Pro Gly Val Asn			
85	90	95	
Ala Ser Tyr Glu Glu Asn Asp Ile Lys Phe Leu Ile Asn Asp Leu Ala			
100	105	110	
Lys Gln Trp Glu Lys Asn Ser Phe Asp Lys Arg Asn Lys Met Phe Trp			
115	120	125	
His Leu Ala Ser Val Tyr Glu Met Trp Phe Ala Asp Lys Lys Glu Leu			
130	135	140	
Trp Ser Lys Gln Asp Asn Ile Ile Lys Phe Lys Lys Asn Leu Glu Glu			

6026

145	150	155	160
Cys	Glu	Val	Gly
Leu	Gln	Lys	Lys
		Glu	Gly
		Leu	Lys
		Asn	Lys
			Gly
165		170	175
Gly	Lys	Pro	

<210> 10184

<211> 106

<212> PRT

<213> B.fragilis

<400> 10184

Tyr	Gly	Asp	Cys	Ala	Asp	Pro	Ser	Ser	Pro	Val	Val	Glu	Asp	Met	Gly
1				5					10				15		
Ser	Asn	Asp	Arg	Leu	Asn	Gln	Val	Val	Leu	Gln	Lys	Val	Ile	Ser	Thr
							20		25				30		
Arg	Lys	Met	Glu	Leu	Ile	Glu	Glu	Leu	Gln	Ile	Met	Asp	Ser	Lys	Asp
	35					40					45				
Val	Leu	Leu	Tyr	Lys	Lys	Leu	Ala	Ser	Gln	Ile	Asn	Val	Phe	Leu	Asp
	50					55					60				
Thr	Lys	Glu	Ala	Ile	Arg	Lys	Ala	Val	Ile	Glu	Glu	Ser	Leu	Val	Arg
65					70				75			80			
Lys	Asp	Leu	Met	Arg	Cys	Ile	Gln	Asp	Asn	Lys	Gln	Ala	Thr	Arg	Lys
						85			90			95			
Leu	Thr	Leu	Gly	Asn	Ile	Ile	Val	Glu	Lys						
						100			105						

<210> 10185

<211> 318

<212> PRT

<213> B.fragilis

<400> 10185

Arg	Asn	Arg	Leu	Ala	Leu	Pro	Pro	Arg	Val	Lys	Thr	Glu	Arg	Arg	Pro
1				5				10			15				
Glu	Ser	Thr	Gly	Val	Tyr	Ala	Leu	Lys	Ile	Trp	Leu	Asn	Gly	Gly	Ser
					20			25			30				
Val	Phe	Leu	Ala	Gln	Pro	Val	Ser	Val	Lys	Ala	Gly	Lys	Gln	Tyr	Thr
	35					40					45				
Leu	Ser	Phe	Trp	Asn	Lys	Gly	Ser	Val	Gly	Asn	Arg	Glu	Ile	Val	Val
	50					55					60				
Thr	Leu	Phe	Trp	Tyr	Asp	Asn	Gly	Ser	Ile	Lys	Ser	Arg	Glu	Lys	Ile
65						70			75			80			
Leu	Ser	Ile	Arg	Thr	Gly	Lys	Asp	Glu	Trp	Arg	Arg	Val	Glu	Ser	Thr
					85			90			95				
Val	Thr	Ile	Pro	Glu	Asn	Ile	His	Ser	Met	Gly	Met	Gly	Ile	Arg	Thr
						100			105			110			
Gln	Ser	Tyr	Gln	Gly	Tyr	Met	Leu	Ile	Asp	Asp	Met	Ser	Leu	Val	Leu
						115			120			125			
Lys	Glu	Ser	Gly	Pro	Asp	Ile	Ser	Ala	Val	Pro	Glu	Ala	Pro	Asp	Asn
	130					135					140				
Leu	Arg	Met	Lys	Ala	Tyr	Gln	Asn	Glu	Met	Glu	Ile	Cys	Trp	Asn	Lys
145						150				155			160		
Val	Ser	Asp	Glu	Thr	Ile	Lys	Trp	Glu	Val	Val	Phe	Asp	Asp	His	Val
					165			170			175				
Glu	Thr	Ile	Thr	Phe	Gly	Asn	Ser	Tyr	Val	Lys	Thr	Lys	Leu	Ile	Pro
					180			185			190				
Gly	Ser	Thr	His	His	Ile	Lys	Val	Arg	Ala	Gly	Lys	Gly	Lys	Glu	Phe
	195					200					205				

Ser Pro Tyr Ala Glu Arg Arg Gly Ala Thr Glu Arg Met Arg Glu Ala
 210 215 220
 Glu Asn Ser Glu Asp Arg Ile Pro Tyr Leu Arg Thr Ile Leu Pro Asp
 225 230 235 240
 Gly Ser Cys Glu Gly Arg Phe Leu Lys Leu Tyr Tyr Asn Glu Leu Ala
 245 250 255
 Asn Pro Asn Ala Lys Val Ser Tyr Lys Leu Asp Gly Val Thr Ile Glu
 260 265 270
 Pro Lys Asp Asn Thr Leu Glu Phe Pro Glu Phe Gly Phe Tyr Lys
 275 280 285
 Arg Phe Arg Leu Glu Val Tyr Ile Asp Glu Gly Glu Gly Arg Glu Trp
 290 295 300
 Glu Ile Leu Tyr Pro His Leu Gly Val Lys Arg Asn Glu Lys
 305 310 315

<210> 10186

<211> 64

<212> PRT

<213> B.fragilis

<400> 10186

Val Met Leu Arg Cys Trp Phe Ile Asn Ser Ile Thr Gln Ser Ala Arg
 1 5 10 15
 Gln Lys Thr Val Ser Phe Pro Ile Phe Ile Arg Thr Arg Ile Leu Ile
 20 25 30
 Pro Lys Phe Ile Val Ala Lys Glu Glu Arg Lys Lys His Val Tyr Ser
 35 40 45
 Leu Val Leu Val Thr Ile Leu Ile Lys Phe Tyr Cys Lys Tyr Lys Thr
 50 55 60

<210> 10187

<211> 624

<212> PRT

<213> B.fragilis

<400> 10187

Gly Pro Ile Phe Leu Ser Gly Met Asn Ile Gln Asp Ala Glu Arg Ser
 1 5 10 15
 Leu Arg Arg Glu Phe Ser Lys Ile Tyr Ala Ala Ile Pro Gln Lys Thr
 20 25 30
 Val His Ile Glu Leu Ser Leu Gly Arg Ile Arg Thr Ile Met Ile Asn
 35 40 45
 Val Met Gly Glu Val Lys Val Pro Gly Ile Tyr Arg Leu Ser Ala Phe
 50 55 60
 Ala Ser Val Phe His Ala Leu Tyr Arg Ala Gly Gly Ile Ser Asp Ile
 65 70 75 80
 Gly Ser Leu Arg Asp Ile Arg Val Val Arg Asp Gly Lys Glu Ile Val
 85 90 95
 Arg Val Asp Val Tyr Asp Tyr Ile Met Lys Gly Lys Leu Thr Asp Asn
 100 105 110
 Ile Arg Leu Ser Glu Gly Asp Val Ile Leu Val Pro Pro Tyr Gln Asn
 115 120 125
 Leu Val Ser Ile Ser Gly Lys Val Lys Arg Pro Met Lys Tyr Glu Met
 130 135 140
 Lys Ser Gly Glu Thr Val Ala Thr Leu Leu Ser Tyr Ala Gly Gly Phe
 145 150 155 160
 Thr Gly Asp Ala Tyr Arg Ser Ala Ile Arg Leu Phe Arg Met Gly Gly
 165 170 175
 Lys Ala Lys Gln Val Tyr Asn Val Ala Gln Asp Asp Tyr Gln Ser Tyr

180	185	190
Leu	Leu	Ala
Asp	Gly	Asp
Lys	Leu	Ser
Val	Glu	Ala
Val	Leu	Glu
Arg		
195	200	205
Phe	Ser	Asn
Lys	Val	Glu
Ile	Arg	Gly
Ala	Val	Tyr
		Arg
210	215	220
Tyr	Gln	Leu
Asp	Asp	Ser
Val	Thr	Gly
Thr	Val	Arg
Gln	Leu	Ile
		Ser
225	230	235
Lys	Ala	Glu
Gly	Leu	Arg
Gly	Asp	Ala
Phe	Leu	Asn
Arg	Leu	Arg
245	250	255
Arg	Arg	Gln
Gln	Glu	Asp
Leu	Leu	Thr
Thr	His	Glu
Glu	Met	Ile
Met	Pro	Pro
Val	Val	Asp
Leu		Leu
260	265	270
Lys	Lys	Met
Met	Asp	Asp
Asp	Thr	Ser
Ala	Asp	Leu
Cys		Glu
Leu		Gln
		Lys
275	280	285
Asp	Val	Leu
Tyr	Ile	Pro
Pro	Ser	Val
Lys	Asp	Ile
Glu		Glu
		Gly
290	295	300
Leu	Ser	Ile
Tyr	Gly	Asp
Val	Arg	Val
Pro	Gly	Phe
		Pro
305	310	315
		320
Lys	Asn	Thr
Thr	Thr	Ile
Gln	Asp	Leu
Ile	Val	Lys
		Ala
325	330	335
Glu	Ser	Ala
Ser	Met	Val
Val	Arg	Ile
Asp	Val	Ser
Arg	Arg	Ile
340	345	350
Pro	Gly	Ser
Ile	Leu	Ser
Ser	Asn	Val
Ile	Gly	Lys
Ser	Phe	Thr
355	360	365
Glu	Leu	Ala
Asn	Gly	Leu
Leu	Ile	Gly
Glu	Asp	Lys
Gly	Phe	Glu
Leu		Leu
370	375	380
Glu	Pro	Tyr
Tyr	Asp	Ile
Asp	Ile	Val
Phe	Val	Arg
Arg	Arg	Ser
385	390	395
Gln	Ala	Asn
Asn	Val	Thr
Val	Glu	Gly
Glu	Val	Val
Val	Phe	Thr
Phe	Thr	Gly
Asn		Asn
Tyr		Tyr
405	410	415
Ala	Leu	Thr
Lys	Ser	Asn
Glu	Arg	Leu
Ser	Ser	Ser
Leu	Ile	Ala
420	425	430
Gly	Gly	Leu
Ser	Lys	Glu
Ala	Tyr	Val
Arg	Arg	Gly
435	440	445
Arg	Met	Thr
Thr	Ala	Asp
Glu	Ile	Arg
Arg	Arg	Lys
450	455	460
Leu	Val	Lys
Gly	Ser	Glu
Glu	Asn	Ser
Ile	Ser	Pro
		Val
465	470	475
Thr	Gly	Ser
Thr	Tyr	Pro
Tyr	Pro	Val
Gly	Ile	Glu
Ile	Leu	Glu
		Lys
485	490	495
Asn	Pro	Gly
Ser	Asp	Glu
Asp	Asp	Met
Met	Val	Leu
500	505	510
Phe	Ile	Pro
Lys	Tyr	Val
Ser	Thr	Val
Thr	Val	Thr
Ile	Ser	Gly
Ala	Val	Ala
		Met
515	520	525
Tyr	Pro	Asn
Asn	Thr	Ile
Ile	Leu	Tyr
Tyr	Gln	Lys
Gly	Ser	Asn
Asn	Leu	Asp
Tyr	Tyr	Tyr
530	535	540
Ile	Glu	Gln
Gln	Ala	Gly
Gly	Phe	Gly
Asn	Arg	Asn
Arg	Ala	Leu
545	550	555
Tyr	Val	Val
Tyr	Met	Asn
Met	Gly	Met
Asn	Val	Val
Ser	Arg	Leu
Arg	Leu	Arg
565	570	575
Val	Cys	Ala
Ile	Glu	Pro
Pro	Gly	Cys
Glu	Ile	Ile
Ile	Val	Pro
Pro	Ser	Lys
Ser	Lys	Glu
580	585	590
Asn	Arg	Lys
Lys	Lys	Thr
Thr	Val	Pro
Pro	Arg	Asp
Arg	Asp	Val
Asp	Val	Ala
Val	Ala	Gly
Ala	Met	Met
Met	Val	Gly
Val	Gly	Met
Ala	Met	Ile
610	615	620

<210> 10188

<211> 132

<212> PRT

<213> B.fragilis

<400> 10188

Lys	Lys	Cys	Val	Ser	Arg	Lys	Ser	Cys	Tyr	Gly	Glu	Glu	Val	Ser	Asn
1															
			5						10						15
Phe	Cys	Ser	Leu	Met	Lys	Ser	Glu	Ile	Phe	Val	Arg	Phe	Val	Ser	Cys
			20						25						30
Ile	Ala	Lys	Lys	Val	Ser	Cys	Leu	Lys	Asp	Met	Ile	Leu	Lys	Lys	Thr
			35					40							45
Asn	Asp	Lys	Gly	Ala	Leu	Leu	Phe	Ala	Leu	Phe	Ile	Leu	Leu	Ala	Gly
			50					55							60
Gly	Ser	Arg	Ala	Arg	Gln	His	Met	Lys	Asp	Asp	His	Val	Ile	Arg	Gly
			65					70			75				80
Lys	Gln	Val	Ala	Val	Phe	Gly	Arg	Asn	Ile	Phe	Thr	Ala	Arg	Asn	Leu
			85						90						95
Ser	Phe	Glu	Pro	Ser	Leu	Asp	Ile	Pro	Thr	Pro	Glu	Lys	Tyr	Val	Ile
			100					105							110
Arg	Ser	Gly	Asp	Glu	Leu	Ile	Ile	Asp	Val	Trp	Gly	Ala	Ser	Glu	Ile
			115					120							125
Gln	Ser	Gly	Lys												
			130												

<210> 10189

<211> 316

<212> PRT

<213> B.fragilis

<400> 10189

Tyr	Thr	Glu	Pro	Arg	Cys	Glu	Asp	Ala	Val	Ser	Ala	Phe	Leu	Tyr	Tyr
1															
			5						10						15
Arg	Lys	Gly	Tyr	Asp	Met	Gly	Ala	Asp	Phe	Tyr	Gln	Val	Val	Ile	Trp
			20					25							30
Ser	Phe	Ile	Val	Leu	Ala	Ala	Ser	Glu	Ala	Ile	Tyr	Gly	Leu	Arg	Gln
			35					40							45
Leu	Tyr	Gly	Phe	Thr	Ser	Ser	His	His	Ser	Leu	Tyr	Ser	Leu	Thr	Gly
			50					55							60
Ser	Phe	Phe	Asn	Pro	Gly	Pro	Tyr	Ser	Gly	Tyr	Leu	Ala	Met	Ile	Phe
			65					70			75				80
Pro	Leu	Cys	Leu	Asp	Gln	Trp	Leu	Arg	Leu	Arg	Lys	Arg	Glu	Asn	Lys
			85					90							95
Asn	Trp	Met	Glu	Trp	Thr	Gly	Tyr	Tyr	Gly	Ala	Val	Ala	Val	Leu	Phe
			100					105							110
Leu	Ile	Leu	Cys	Val	Leu	Pro	Ala	Gly	Met	Ser	Arg	Ser	Ala	Trp	Val
			115					120							125
Ala	Ala	Leu	Ile	Ser	Gly	Ile	Trp	Val	Tyr	Gly	Ala	His	Lys	Ser	Trp
			130					135							140
Pro	Val	Arg	Leu	Lys	Arg	Val	Trp	Met	Arg	Lys	Lys	Thr	Lys	Val	Leu
			145					150			155				160
Ala	Val	Thr	Ser	Val	Leu	Cys	Ile	Val	Val	Leu	Val	Gly	Gly	Val	Cys
			165					170							175
Leu	Phe	Asn	Leu	Lys	Lys	Asp	Ser	Ala	Ser	Gly	Arg	Leu	Phe	Met	Trp
			180					185							190
Lys	Ile	Ser	Ser	Arg	Ala	Ile	Ala	Glu	Lys	Pro	Phe	Thr	Gly	Tyr	Gly
			195					200							205
Gln	Gly	Asn	Phe	Ala	Leu	Ala	Tyr	Gly	Thr	Ser	Gln	Glu	Ala	Tyr	Phe
			210					215							220
Ala	Glu	Arg	Ser	Tyr	Ser	Pro	Gln	Glu	Glu	Leu	Val	Ala	Gly	Ser	Pro
			225					230			235				240
Glu	Tyr	Ala	Phe	Asn	Glu	Tyr	Leu	Gln	Ile	Ala	Leu	Glu	Trp	Gly	Ile

245

250

255

Pro Val Leu Leu Cys Cys Leu Ala Phe Ala Gly Phe Cys Leu Gln Arg
 260 265 270
 Gly Val Glu Leu Lys Arg Trp Gly Pro Cys Gly Arg Gly Ile Ser Leu
 275 280 285
 Leu Val Phe Ala Phe Ser Ser Tyr Pro Met Gln Leu Pro Ala Phe Gly
 290 295 300
 Ile Ala Phe Leu Ile Leu Leu Met Ala Cys Phe Ala
 305 310 315

<210> 10190

<211> 508

<212> PRT

<213> B.fragilis

<400> 10190

Asp Pro Val Leu Leu Cys Gly Glu Pro Lys Thr Ile Thr Met Lys Lys
 1 5 10 15
 Ile Tyr Ser Ile Leu Leu Ala Ser Ala Leu Thr Leu Ser Ser Cys Ala
 20 25 30
 Asp Phe Leu Asp Val Asp Ser Gln Gly Lys Leu Thr Glu Asp Val Phe
 35 40 45
 Phe Ser Glu Glu Glu Gly Ala Leu Met Ser Ile Asn Ala Ile Tyr Thr
 50 55 60
 Gln Leu Arg Ala Trp Asp Ile Ile Gly Phe Ser Trp Phe Ala Ile Thr
 65 70 75 80
 Glu Leu Pro Gly Asp Asn Ser Asp Thr Gly Ser Glu Leu Ala Asp Gly
 85 90 95
 Ser Val Ala Arg Leu Asn Gln Phe Asn Asp Phe Thr Tyr Asp Ala Ser
 100 105 110
 Thr Ser Glu Ile Asn Gly Trp Trp Glu Gly Asn Tyr Lys Ala Ile Ala
 115 120 125
 Ser Cys Asn Val Ala Leu Asp Asn Leu Gly Ala Val Lys Asn Glu Glu
 130 135 140
 Leu Arg Val Lys Cys Val Ala Gln Ala Arg Phe Phe Arg Gly Phe Phe
 145 150 155 160
 Tyr Phe Asn Leu Val Arg Ala Phe Gly Gly Val Pro Leu Val Thr Lys
 165 170 175
 Val Leu Gln Pro Gly Glu Tyr Asn Gln Pro Arg Ala Thr Glu Glu Ala
 180 185 190
 Val Tyr Gln Gln Ile Ile Glu Asp Leu Thr Tyr Ala Ala Glu His Leu
 195 200 205
 Pro Thr Arg Gln Glu Trp Gly Ala Lys Glu Ser Gly Arg Ala Thr Lys
 210 215 220
 Gly Thr Ala Glu Gly Leu Leu Ala Lys Val Tyr Leu Phe Arg Gln Asp
 225 230 235 240
 Tyr Ala Asn Val Lys Lys Tyr Thr Gly Gln Val Ile Ala Arg Gly Glu
 245 250 255
 Tyr Ser Leu His Arg Asp Tyr Arg Asp Leu Phe Asn Pro Asn Ser Tyr
 260 265 270
 Tyr Ser Asp Glu Val Met Leu Ala Asp Gln Tyr Leu Trp Gly Glu Ser
 275 280 285
 Thr Glu Arg Asn Leu Glu Ser Glu Tyr Val Lys Trp Gln Gly Ile Arg
 290 295 300
 Gly Glu Met Gly Trp Gly Met Phe Ser Pro Ser Glu Ala Leu Asp Gln
 305 310 315 320
 Ala Tyr Glu Ala Gly Asp Pro Arg Arg Thr Ala Thr Ile Phe Tyr Asp
 325 330 335
 Gly Glu Thr Leu Glu Gly Lys Gly Glu Ile His Phe Lys Lys Glu Val

340	345	350
Pro Pro Arg Ala Asn Lys Lys	Thr Ile Trp Pro Thr	Gly Tyr Trp Asn
355 360	365	
Glu Asn Ser Phe Ala Lys Gln Asn Cys His	Leu Ile Phe Leu	Arg Tyr
370 375	380	
Ala Asp Val Leu Leu Met Tyr Ala Glu Ala	Cys Asn Glu Leu	Gly Glu
385 390	395	400
Ser Arg Glu Ala Leu Asp Lys Leu Glu	Met Val Arg Ala	Arg Ala Arg
405 410	415	
Arg Thr Val His Pro Ala Asp Met Thr	Val Gly Leu Pro	Glu Ile Thr
420 425	430	
Glu Thr Gly Lys Glu Lys Leu Arg Glu	Ile Ile Trp Asn	Glu Arg Arg
435 440	445	
Ile Glu Leu Ala Leu Glu Gly His Arg	Phe Asp Leu Ile	Arg Ala
450 455	460	
Asp Lys Val Val Pro Gly Tyr Ala Glu Lys	Met Met Lys Ala	His Gly
465 470	475	480
Lys Thr Asn Phe Ser Ile Ala Lys His	Ala Thr Phe Phe	Ile Pro Gln
485 490	495	
Lys Gln Val Asp Ile Ser Gln Gly Val	Leu Lys Asn	
500 505		

<210> 10191

<211> 572

<212> PRT

<213> B.fragilis

<400> 10191

Val Thr Phe Thr Ser His Phe Asn Glu Lys Cys Met Lys	Lys Phe Leu	
1 5 10	15	
Asn Arg Arg Asn Gly Val Leu Leu Ala Ala Val Leu Val	Ala Val Ala	
20 25 30		
Phe Phe Ser Phe Lys Ser Gly Asp Asp Arg Asn Phe Gln	Ile Ala Lys	
35 40 45		
Asn Leu Asp Thr Phe Asn Ser Ile Val Lys Glu Leu Asp	Met Phe Tyr	
50 55 60		
Val Asp Thr Leu Asp Pro Asn Lys Thr Val Arg Glu Gly	Ile Asp Tyr	
65 70 75 80		
Met Leu Ser Ser Leu Asp Pro Tyr Thr Glu Tyr Tyr Pro	Glu Asp Asp	
85 90 95		
Gln Ala Glu Leu Gln Gln Met Leu Asn Ala Ser Phe Gly	Gly Ile Gly	
100 105 110		
Ser Leu Ile Thr Tyr Asn Gln Lys Leu Lys Arg Ser Met	Ile Ala Glu	
115 120 125		
Pro Phe Glu Gly Thr Pro Ala Ala Lys Val Gly Leu Lys	Ala Gly Asp	
130 135 140		
Ile Leu Met Glu Ile Asp Gly Lys Asp Leu Ala Gly Lys	Asn Asn Gln	
145 150 155	160	
Glu Val Ser Gln Met Leu Arg Gly Ala Val Gly Thr Ser	Phe Lys Leu	
165 170 175		
Lys Val Glu Arg Pro Asp Glu Lys Gly Gly Thr Arg Pro	Leu Glu Phe	
180 185 190		
Asp Ile Val Arg Gln Thr Ile Gln Thr Pro Met Ile Pro	Tyr Asp Thr	
195 200 205		
Ile Phe Asn Lys Asn Val Gly Tyr Ile Asn Leu Ser Thr	Phe Ser Gly	
210 215 220		
Thr Pro Ser Lys Asp Phe Lys Lys Thr Phe Leu Lys Leu	Lys Lys Glu	
225 230 235	240	
Gly Ile Thr Ser Leu Val Ile Asp Leu Arg Gly Asn Gly	Gly Arg	

245	250	255
Leu Glu Glu Ala Val Glu Ile Ala Asn Phe Phe Leu Pro Arg Gly Lys		
260	265	270
Val Ile Val Thr Thr Lys Gly Lys Thr Lys Gln Ala Ser Asn Thr Tyr		
275	280	285
Lys Thr Leu Arg Glu Pro Leu Asp Leu Asp Ile Pro Ile Thr Val Leu		
290	295	300
Val Asn Gly Ala Thr Ala Ser Ala Ser Glu Ile Leu Ser Gly Ala Phe		
305	310	315
Gln Asp Phe Asp Arg Ala Val Ile Val Gly Ser Arg Thr Phe Gly Lys		
325	330	335
Gly Leu Val Gln Thr Thr Arg Pro Leu Pro Tyr Gly Gly Val Met Lys		
340	345	350
Leu Thr Thr Ser Lys Tyr Tyr Ile Pro Ser Gly Arg Cys Val Gln Ala		
355	360	365
Ile Asp Tyr Lys His Arg Asn Glu Asp Gly Ser Val Gly Thr Ile Pro		
370	375	380
Asp Ser Leu Thr Thr Val Phe His Thr Ala Ala Gly Arg Glu Val Arg		
385	390	395
Asp Gly Gly Val Met Pro Asp Ile Glu Val Lys Gln Glu Lys Leu		
405	410	415
Pro Asn Ile Leu Phe Tyr Leu Val Arg Asp Asn Leu Ile Phe Asp Tyr		
420	425	430
Ala Thr Gln Tyr Cys Leu Lys His Pro Ser Ile Pro Ser Pro Gln Glu		
435	440	445
Phe Lys Val Thr Asp Ala Asp Tyr Asn Asp Phe Lys Ala Met Val Lys		
450	455	460
Lys Ala Asp Phe Lys Tyr Asp Gln Gln Ser Glu Lys Ile Met Lys Thr		
465	470	475
Leu Lys Glu Ala Ala Lys Phe Glu Gly Tyr Leu Asp Glu Ala Ser Glu		
485	490	495
Glu Ile Lys Ala Leu Glu Lys Lys Leu Thr His Asn Leu Asp Arg Asp		
500	505	510
Leu Asp Tyr Phe Ser Lys Asp Ile Arg Ser Met Ile Ala Asp Glu Ile		
515	520	525
Ile Lys Arg Tyr Tyr Tyr Thr Arg Gly Gly Ile Ile Gln Gln Leu Lys		
530	535	540
Asp Asp Asp Gly Leu Gln Ala Ala Leu Lys Ile Leu Ala Asp Pro Val		
545	550	555
Lys Tyr Lys Glu Thr Leu Ser Ala Pro Val Lys Lys		
565	570	

<210> 10192

<211> 71

<212> PRT

<213> B.fragilis

<400> 10192

Tyr Arg Ile Thr Met Lys Gln Phe Val Leu Phe Phe Ile Ser Leu Phe			
1	5	10	15
Leu Leu Gly Val Gly Ala Arg Ser Gln Glu Met Tyr Gln Lys Lys Val			
20	25	30	
Phe Ile Ser Ser Arg Gly Asp Ser Leu Asn Tyr Arg Leu Leu Arg Pro			
35	40	45	
Glu Val Glu Lys Thr Gly Leu Arg Leu His His Gly Ala Gly Arg Ile			
50	55	60	
Gln Arg Trp Met Arg Phe Gln			
65	70		

<210> 10193

<211> 149

<212> PRT

<213> B.fragilis

<400> 10193

Leu	Val	Gln	Thr	Gly	Ala	Val	Gly	Ser	Asn	Ala	Gly	Lys	Arg	Val	Val
1				5				10				15			
Gln	Ala	Glu	Val	Gly	Ala	Val	Val	Pro	Pro	Val	Val	Tyr	Tyr	Pro	Cys
		20						25				30			
Gln	Ser	Phe	Asp	Gly	Lys	Val	Ala	Glu	His	Gly	Glu	Arg	Tyr	Ser	Pro
		35						40				45			
Leu	Asn	Phe	Lys	Val	Ala	Tyr	Gly	Thr	Ser	His	Gln	Ile	Gly	Phe	Ala
	50					55					60				
Val	Thr	Glu	Lys	Pro	Val	Glu	Ile	Ser	Leu	His	Asp	Val	Asp	Gly	Met
65					70				75			80			
Asn	Ala	Pro	Glu	Arg	Cys	Gln	Leu	Phe	Val	His	Arg	Phe	Val	Gly	Asp
		85						90				95			
Asp	Gly	Ile	Arg	His	Val	Ile	Val	Ser	Val	Glu	Val	Pro	Pro	Ile	Arg
		100						105				110			
Glu	Ser	Asp	Thr	Pro	Val	His	Leu	Glu	Gln	Ile	Ala	Val	Ser	Thr	Leu
	115					120					125				
Ile	Ala	Gly	Gln	Gly	Ile	Ile	Leu	Phe	Gln	Val	Arg	His	Leu	Leu	Gln
	130					135					140				
Leu	Phe	Ile	Glu	Thr											
145															

<210> 10194

<211> 772

<212> PRT

<213> B.fragilis

<400> 10194

Ile	Asp	Thr	Lys	Thr	Val	Lys	Thr	Met	Lys	His	Phe	Val	Arg	Arg	Met
1					5			10				15			
Gln	Ala	Leu	Ala	Ala	Ser	Leu	Val	Val	Val	Ala	Ala	Gly	Leu	Gln	Ala
						20			25			30			
Gln	Lys	Ala	Pro	Arg	Asp	Met	Asp	Arg	Phe	Ile	Asp	Gln	Leu	Met	Lys
		35					40					45			
Lys	Met	Thr	Leu	Glu	Glu	Lys	Ile	Gly	Gln	Leu	Asn	Leu	Pro	Val	Thr
	50					55				60					
Gly	Glu	Ile	Thr	Thr	Gly	Gln	Ala	Lys	Ser	Ser	Asp	Val	Ala	Lys	Arg
65						70			75			80			
Ile	Arg	Asn	Gly	Glu	Val	Gly	Gly	Leu	Phe	Asn	Leu	Lys	Gly	Val	Glu
		85					90					95			
Arg	Ile	Arg	Glu	Val	Gln	Arg	Gln	Ala	Val	Glu	Glu	Ser	Arg	Leu	Gly
		100					105					110			
Ile	Pro	Leu	Leu	Phe	Gly	Met	Asp	Val	Ile	His	Gly	Tyr	Glu	Thr	Ile
	115					120				125					
Phe	Pro	Ile	Pro	Leu	Gly	Leu	Ser	Cys	Thr	Trp	Asp	Met	Lys	Ala	Ile
	130					135				140					
Glu	Glu	Ser	Ala	Arg	Ile	Ala	Ala	Val	Glu	Ala	Ser	Ala	Asp	Gly	Ile
145						150				155			160		
Ser	Trp	Thr	Phe	Ser	Pro	Met	Val	Asp	Val	Ser	Arg	Asp	Pro	Arg	Trp
		165					170				175				
Gly	Arg	Val	Ser	Glu	Gly	Asn	Gly	Glu	Asp	Pro	Phe	Leu	Gly	Ala	Ala
		180					185				190				
Ile	Ala	Arg	Ala	Met	Ile	Arg	Gly	Tyr	Gln	Gly	Lys	Asp	Met	Ser	Arg
	195					200				205					

Asn Asp Glu Ile Met Ala Cys Val Lys His Phe Ala Leu Tyr Gly Ala
 210 215 220
 Ser Glu Ala Gly Arg Asp Tyr Asn Thr Val Asp Met Ser Arg Gln Arg
 225 230 235 240
 Met Phe Asn Glu Tyr Met Leu Pro Tyr Gln Ala Ala Val Glu Ala Gly
 245 250 255
 Val Gly Ser Val Met Ala Ser Phe Asn Glu Val Asp Gly Val Pro Ala
 260 265 270
 Thr Gly Ser Lys Trp Leu Met Thr Asp Val Leu Arg Lys Gln Trp Gly
 275 280 285
 Phe Asp Gly Phe Val Val Thr Asp Tyr Thr Gly Ile Asn Glu Met Ile
 290 295 300
 Asp His Gly Met Gly Asp Gln Gln Thr Val Ala Ala Leu Ala Leu Asn
 305 310 315 320
 Ala Gly Val Asp Met Asp Met Val Ser Asp Ala Phe Ser Gly Thr Leu
 325 330 335
 Lys Lys Ser Val Glu Glu Gly Lys Val Ser Ala Ala Ala Ile Asp Ala
 340 345 350
 Ala Cys Arg Arg Ile Leu Glu Ala Lys Tyr Lys Leu Gly Leu Phe Asp
 355 360 365
 Asn Pro Tyr Lys Tyr Cys Asp Val Asn Arg Pro Lys Lys Gln Ile Phe
 370 375 380
 Thr Lys Glu His Arg Ala Ile Ala Arg Lys Thr Ala Ser Glu Ser Phe
 385 390 395 400
 Val Leu Leu Lys Asn Glu Gly Val Leu Pro Leu Ser Lys Lys Gly Thr
 405 410 415
 Ile Ala Val Val Gly Pro Leu Ala Asn Thr Arg Ser Asn Met Pro Gly
 420 425 430
 Thr Trp Ser Val Ala Ala Val Leu Asp Asn Ala Pro Ser Leu Val Glu
 435 440 445
 Gly Leu Arg Glu Val Val Gly Asp Arg Ala Lys Val Val Thr Ala Lys
 450 455 460
 Gly Ser Asn Leu Ile Gly Asp Ala Asp Tyr Glu Lys Arg Ala Thr Met
 465 470 475 480
 Phe Gly Arg Glu Leu His Arg Asp Asn Arg Thr Asp Arg Glu Leu Leu
 485 490 495
 Asp Glu Ala Leu Lys Val Ala Ala Gly Ala Asp Val Ile Val Ala Ala
 500 505 510
 Leu Gly Glu Ser Ser Glu Met Ser Gly Glu Ser Ser Arg Thr Asn
 515 520 525
 Leu Glu Met Pro Asp Val Gln Arg Ala Leu Leu Gln Glu Leu Leu Lys
 530 535 540
 Thr Gly Lys Pro Val Val Leu Val Leu Phe Thr Gly Arg Pro Leu Val
 545 550 555 560
 Leu Thr Trp Glu Glu His Val Pro Ala Ile Leu Asn Val Trp Phe
 565 570 575
 Gly Gly Ser Glu Ala Ala Tyr Ala Ile Ser Asp Val Leu Phe Gly Asp
 580 585 590
 Val Asn Pro Ser Gly Lys Leu Thr Ala Thr Phe Pro Gln Asn Val Gly
 595 600 605
 Gln Ile Pro Leu Phe Tyr Asn His Lys Asn Thr Gly Arg Pro Leu Gln
 610 615 620
 Glu Gly Arg Trp Phe Glu Lys Phe Arg Ser Asn Tyr Leu Asp Val Ser
 625 630 635 640
 Asn Glu Pro Leu Tyr Pro Phe Gly Tyr Gly Leu Ser Tyr Thr Thr Phe
 645 650 655
 Ala Tyr Ser Asp Ile His Leu Ser Ser Thr Glu Met Ser Ala Asp Gly
 660 665 670
 Lys Leu Thr Ala Thr Val Thr Val Asn Thr Gly Ser Arg Asp Gly

675	680	685
Ala Glu Val Val Gln Leu Tyr Ile Arg Asp Leu Val Gly Ser Val Thr		
690	695	700
Arg Pro Val Lys Glu Leu Lys Gly Phe Glu Lys Ile Phe Leu Lys Ala		
705	710	715
Gly Glu Ser Arg Lys Val Ser Phe Ser Ile Thr Pro Glu Leu Leu Lys		
725	730	735
Phe Tyr Asn Tyr Asp Leu Gln Phe Val Cys Glu Pro Gly Asp Phe Asp		
740	745	750
Val. Met Ile Gly Gly Asn Ser Arg Asp Val Lys Lys Ala Arg Phe Leu		
755	760	765
Leu Lys Gly Glu		
770		

<210> 10195

<211> 948

<212> PRT

<213> B.fragilis

<400> 10195

Leu Met Lys Asn Leu Leu Leu Phe Leu Val Phe Ala Cys Thr Phe Ser			
1	5	10	15
Phe Ser Cys Leu Gly Ser Pro Val Pro Phe Ser Pro Ile Val Arg Asn			
20	25	30	
Tyr Ser Val Leu Asp Tyr Asn Ala Gly Asn Glu Asn Trp Ala Val Ala			
35	40	45	
Gln Asp Glu Arg Gly Val Met Tyr Phe Gly Asn Asn Ser Gly Leu Leu			
50	55	60	
Arg Tyr Asp Gly Ser Arg Trp Lys Leu Phe Pro Leu Pro Thr Ser Gly			
65	70	75	80
Ile Val Arg Ala Val Tyr Val Ala Ser Asp Arg Arg Ile Tyr Val Gly			
85	90	95	
Ser Phe Glu Glu Phe Gly Tyr Phe Glu Gln Asn Asp Leu Asn Leu Leu			
100	105	110	
Glu Tyr His Ser Leu Lys Glu Gln Val Lys Gly Phe Asp Phe His Asn			
115	120	125	
Asp Glu Ile Trp Thr Ile Val Glu Gln Gly Gly Asn Ile Ile Phe Gln			
130	135	140	
Ser Phe Gly Ser Tyr Phe Ile Tyr Asp Gly Lys Gly Thr Lys Gly Val			
145	150	155	160
Arg Cys Pro Glu Leu Pro Leu Asn Leu Phe Arg Ile Gly Asp Thr Leu			
165	170	175	
Tyr Ser Gln Leu Ile Asn Gly Gly Val Cys Thr Phe Ala Gly Asp Lys			
180	185	190	
Phe Ile Pro Leu Ile Ser Arg Gln Glu Leu Gly Asp Ser Asp Val Leu			
195	200	205	
Ala Gly Leu Pro Tyr Pro Gly Gly Met Leu Leu Leu Thr Arg Asn Ser			
210	215	220	
Gly Gly Tyr Ile His Thr Ser Ser Gly Ile Arg Ser Trp His Thr Asp			
225	230	235	240
Ser Asp Glu Glu Leu Lys Arg His Thr Val Asn Arg Ala Val Met Thr			
245	250	255	
Lys Asp Ser Cys Tyr Val Ile Gly Thr Ile Ser Asn Gly Leu Tyr Ala			
260	265	270	
Phe Ser Lys Glu Gly His Leu Leu Trp Lys Glu Asn Ala Asp Asn Gln			
275	280	285	
Leu Glu Asn Asn Thr Val Leu Gly Leu Tyr Cys Asp Met Asp Asn Asn			
290	295	300	
Ile Trp Thr Ala Leu Asp Asn Gly Ile Ala Tyr Val Arg Asn Asn Ser			

305	310	315	320
Leu Ile Tyr His Phe Glu Pro Val Arg Arg Lys Val Gly Met Val Tyr			
325	330	335	
Asp Val Leu Val Arg Asp Lys Asp Ala Tyr Ile Ala Ser Asn Gln Gly			
340	345	350	
Leu Tyr Arg Leu Glu Asp Thr Arg Leu Glu Leu Val Pro Gly Leu Glu			
355	360	365	
Glu Gln Ala Trp Thr Ile Gly Glu Trp Gly Gly Gln Val Leu Cys Gly			
370	375	380	
His Asn Lys Gly Thr Phe Gln Ile Lys Gly Met Gln Ala Arg Leu Leu			
385	390	395	400
Ser Asp Val Arg Gly Ala Met Cys Met Arg Gln Ala Gln Ile Asn Gly			
405	410	415	
Glu Gln Leu Leu Ile Gln Gly Thr Tyr Thr Phe Leu Asn Ile Tyr Lys			
420	425	430	
Lys Ser Ala Ala Gly Glu Trp Tyr Phe Ala Asn Ser Val Gly Asn Phe			
435	440	445	
Ser His Met Ala Lys Asn Ile Glu Val Asp Ala His Gly Asn Ile Trp			
450	455	460	
Val Gln His Met Arg Lys Gly Leu Tyr Arg Leu Arg Leu Asp Glu Glu			
465	470	475	480
Leu Lys Gln Val Thr Asp Leu Lys Gln Tyr Asp Ser Leu Ser Gly Asn			
485	490	495	
Gln Gly Gly Asn Cys Tyr Leu Phe Lys Val Asn Gly Arg Val Ala Phe			
500	505	510	
Ser Asp Gly Arg Asn Phe Tyr Thr Tyr Asp Asp Met Ala Asp Ser Ile			
515	520	525	
Ile Pro Tyr Lys Ala Met Asn Glu Gln Leu Ala Thr Leu Arg Gly Ile			
530	535	540	
His Thr Val Asp Val Met Lys Gly Asp Leu Tyr Trp Phe Leu Ser Asp			
545	550	555	560
Arg Glu Ala Tyr Leu Val Arg Cys Thr Val Ser Asp Phe Lys Val Glu			
565	570	575	
Arg Arg Ile Pro Phe Ser Met Phe Gly Asn Leu Pro Ile Glu Gly Leu			
580	585	590	
Ala Arg Ile Val Tyr Asp Arg Arg Asn Asp Cys Ser Tyr Leu Cys Leu			
595	600	605	
Asn Asn Ser Phe Ala Arg Ile Ala Ala Asp Ser Thr Gly Leu Tyr Lys			
610	615	620	
Ser Arg Gln Lys Pro Ser Leu Trp Val Ser Gly Phe Ser Ala Ser Asp			
625	630	635	640
Glu Gln Thr Gly Glu Arg Ile Gln Leu Pro Val Ser Gly Thr Asp Glu			
645	650	655	
Ile Ala Ser Ala Phe Asn Asn Ile Ser Ile Ser Leu Ala Tyr Pro Val			
660	665	670	
Tyr Asn Asp Phe Ala Leu Asn Val Arg Tyr Arg Leu Glu Gly Leu Ser			
675	680	685	
Ala Ser Gly Lys Trp Thr Glu Gly Leu Pro Asp Leu Gln Lys Glu Phe			
690	695	700	
Thr Arg Leu Pro Phe Gly Ser Tyr Cys Phe Arg Ala Glu Val Tyr Asp			
705	710	715	720
Glu Asn Gly Val Ile Ser Ser Val Asp Leu Pro Phe Arg Ile Leu Arg			
725	730	735	
Pro Trp Tyr Leu Ser Tyr Pro Ala Val Ala Val Tyr Ala Leu Ser Gly			
740	745	750	
Ile Ala Leu Leu Leu Gly Leu Leu Tyr Gly Val Tyr Val Tyr Thr Lys			
755	760	765	
Lys Lys Lys Asp Val Val Ile Glu Arg Gln Arg Ala Arg His Glu Ala			
770	775	780	

<210> 10196

<211> 360

<212> PRT

<213> *B. fragilis*

<400> 10196

Asp Lys Ile Ile Gly Leu Gly Asn Ala Leu Val Asp Val Leu Ala Thr
 35 40 45

Leu Lys Asp Asp Thr Leu Leu Asp Glu Met Gly Leu Pro Lys Gly Ser
 50 55 60

Met Gln Leu Ile Asp Asp Ala Lys Leu Gln Gln Ile Asn Glu Arg Phe
65 70 75 80

Ile Leu Gly Leu Ala Cys Leu Gly Ala Gly Thr Gly Phe Ile Gly Lys
 100 105 110

Ile Gly Asn Asp Ala Tyr Gly Asn Phe Phe Arg Ala Asn Leu Gln Arg
 115 120 125

Asn Gly Ile Glu Asp Lys Leu Leu Val Ser Asp Leu Pro Ser Gly Val
130 135 140

Ala Ser Thr Phe Ile Ser Pro Asp Gly Glu Arg Thr Phe Gly Thr Tyr
 145 150 155 160

Phe Lys Gly Tyr Ala Tyr Leu Leu Ile Glu Gly Tyr Leu Val Gin Asp
 180 185 190
 His Asn Met Ile Leu His Ala Ile Glu Ile Ala Ile Ile Glu Ile Glu Ile

HIS Asp Met Ile Leu His Ala Ile Glu Leu Ala Lys Glu Ala Gly Leu
 195 200 205
 Gln Val Cys Leu Asp Met Ala Ser Tyr Asp Ile Val Ala Gly Asp Leu

Gln Val Cys Leu Asp Met Ala Ser Iyl Asn Ile Val Ala Gly Asp Leu
 210 215 220
 Glu Phe Phe Thr Leu Leu Ile Asp Lys Tyr Val Asp Ile Val Phe Ala

225 230 235 240

Asn Glu Glu Glu Ala Lys Ala Phe Thr Gly Lys Glu Asp Pro Lys Glu
 245 250 255
 Ala Leu Glu Leu Ile Ser Lys Lys Cys Ser Ile Ala Ile Val Lys Val
 260 265 270
 Gly Gly Asn Gly Ser Tyr Ile Arg Lys Gly Thr Glu Glu Ile Lys Val
 275 280 285
 Glu Ala Ile Pro Val Lys Lys Val Ile Asp Thr Thr Gly Ala Gly Asp
 290 295 300
 Tyr Phe Ala Ser Gly Phe Leu Tyr Gly Leu Thr Cys Gly Tyr Ser Leu
 305 310 315 320
 Glu Lys Cys Ala Lys Ile Gly Ser Ile Leu Ser Gly Asn Val Ile Gln
 325 330 335
 Ile Val Gly Thr Thr Ile Pro Gly Glu Arg Trp Asp Glu Ile Lys Leu
 340 345 350
 Asn Ile Asn Glu Val Leu Ser Glu
 355 360

<210> 10197

<211> 824

<212> PRT

<213> B.fragilis

<400> 10197
 Lys Gln Ile Arg Met Lys Asn Val Leu Thr Gly Leu Phe Leu Leu Ile
 1 5 10 15
 Leu Ala Thr Ala Cys Ser Glu Glu Pro Gln Thr Ile Thr Pro Val
 20 25 30
 Pro Phe Asn Gln Val Thr Leu Thr Asp Gly Phe Trp Lys Asn Arg Met
 35 40 45
 Gln Thr Glu Ile Asn Val Thr Val Pro Phe Ser Val Glu Gln Ser Ala
 50 55 60
 Pro Ala Val Glu Arg Phe Arg Arg Cys Ala Ala Phe Leu Ala Gly Asp
 65 70 75 80
 Ser Thr Ala Leu Pro Glu Thr His Arg Phe Ile Ser Ser Asp Leu Tyr
 85 90 95
 Lys Val Met Glu Gly Val Ser Tyr Ser Leu Met Ile Gln Pro Asn Lys
 100 105 110
 Glu Leu Glu Glu Phe Met Asp Arg Val Ala Asp Leu Ile Thr Ala Ser
 115 120 125
 Gln Lys Asp Asp Gly Tyr Leu Tyr Ile Ser His Ile Cys Gly Asn Pro
 130 135 140
 Asp Pro Arg Glu Met Gly Glu Lys Pro Tyr Ser Trp Val Val His Ser
 145 150 155 160
 His Glu Leu Tyr Asn Val Gly His Leu Tyr Glu Ala Ala Val Ala Tyr
 165 170 175
 Tyr Gln Ala Thr Gly Lys Asp Lys Leu Leu Asn Val Ala Ile Lys Ser
 180 185 190
 Ala Lys His Val Asn Lys Val Phe Phe Glu Gly Asp Pro Asn Tyr
 195 200 205
 Asn Gly Gly Lys Pro Ile Asn Gln Ala Pro Gly His Glu Glu Ile Glu
 210 215 220
 Leu Ala Leu Cys Lys Leu Tyr Arg Val Thr Asn Asp Pro Leu Tyr Leu
 225 230 235 240
 Asp Met Ala Lys Lys Phe Leu Glu Ile Arg Gly Val Thr Tyr Arg Pro
 245 250 255
 Glu Gly Glu Gly Val Met Ala Pro Thr Tyr Ala Gln Gln His Ala Pro
 260 265 270
 Val Lys Glu Gln Thr Glu Ala Val Gly His Ala Val Arg Ala Ala Tyr
 275 280 285

Leu Tyr Thr Ala Met Ala Gln Val Asp Ala Leu Thr Gly Leu Asn Asp
 290 295 300
 Tyr Thr Lys Ala Leu Asn Ser Ile Trp Thr Asn Leu Val Thr Thr Arg
 305 310 315 320
 Met His Ile Thr Gly Gly Leu Gly Ala Val Glu Gly Met Glu Gly Phe
 325 330 335
 Gly Ala Pro Tyr Glu Leu Pro Asn Leu Thr Ala Tyr Asn Glu Thr Cys
 340 345 350
 Ala Ala Val Ala Asn Val Phe Phe Asn Tyr Gly Met Tyr Leu Asp Ser
 355 360 365
 Gly Asp Ala Lys Phe Leu Asp Ile Ala Glu Leu Ser Leu Phe Asn Asn
 370 375 380
 Ser Leu Ala Gly Ile Asn Leu His Gly Asp Arg Phe Phe Tyr Val Asn
 385 390 395 400
 Pro Leu Glu Ala Asp Gly Val Arg Arg Phe Asn His Gly Asn Gly Gly
 405 410 415
 Arg Ala Lys Trp Phe Gly Cys Ala Cys Cys Pro Pro Asn Ile Ser Arg
 420 425 430
 Leu Ile Leu Gln Val Pro Gly Tyr Met Tyr Ala Tyr Ser Lys Asp Arg
 435 440 445
 Val Tyr Leu Thr Leu Tyr Gly Ser Gln Thr Thr Ile Pro Leu Glu
 450 455 460
 Gly Thr Arg Val Lys Leu Glu Gln Thr Ser Ala Tyr Pro Phe Asp Gly
 465 470 475 480
 Lys Val Arg Leu Thr Val Gln Pro Glu Lys Gly Ser Lys Phe Ser Val
 485 490 495
 Cys Met Arg Ile Pro Thr Trp Ala Arg Ser Asp Glu Phe Val Pro Gly
 500 505 510
 Gly Leu Tyr Pro Tyr Lys Gln Pro Lys Gln Ala Glu Val Glu Leu Ser
 515 520 525
 Val Asn Gly Gln Lys Thr Asp Phe Lys Met Glu Lys Gly Phe Ala Val
 530 535 540
 Ile Lys Arg Asp Trp Lys Pro Gly Asp Val Val Glu Leu Asn Ile Pro
 545 550 555 560
 Met Pro Val Arg Phe Val Asp Cys Ile Pro Glu Val Ser Glu Asn Ile
 565 570 575
 Gly Lys Thr Ala Val Thr Arg Gly Pro Leu Val Tyr Cys Ala Glu Glu
 580 585 590
 Val Asp Asn Ala Gly Pro Val Gln Arg Leu Tyr Leu Gly Asp Thr Asn
 595 600 605
 Glu Ala Gln Ala Lys Val Ala Asn Ile Ser Ser Gly Val Leu Gln Gly
 610 615 620
 Leu Glu Arg Ile Thr Leu Pro Gly Met Glu Lys Lys Val Gly Gly Ile
 625 630 635 640
 Thr Ser Arg Glu Ile Thr Met Ile Pro Tyr Tyr Ala Trp Cys Asn Arg
 645 650 655
 Gly Asp Asn Arg Thr Met Leu Val Trp Leu Asn Glu Glu Ala Ser Thr
 660 665 670
 Ala Ser Ile Gly Gln Gln Thr Met Ala Tyr Leu Arg Asn Val Lys Gly
 675 680 685
 Val Asn Ala Ser Ser Val Ala Gly Gly Lys Asn Ile Ser Val Arg Ala
 690 695 700
 Leu Cys Asp Gly Lys Val Ser Glu Ser Ser Ala Asp Lys Leu Thr Glu
 705 710 715 720
 Gln Trp Val Ser Glu Gly Ser Gly Lys Gln Trp Val Gln Val Asp Phe
 725 730 735
 Arg Glu Pro Phe Leu Leu Asn Ser Leu Ser Val Tyr Trp Leu Asp Asp
 740 745 750
 Gln Asp Lys Ile Thr Val Pro Ser Gly Trp Ser Val Glu Tyr Lys Ser

755	760	765
Asp Ala Gly Trp Thr Pro Leu Glu Leu Tyr Val Thr Asp Ser Tyr Gln		
770	775	780
Met Gly Thr Asp Arg Phe Asn Val Val His Pro Ser Gly Ser Leu Glu		
785	790	795
Val Glu Ser Val Arg Ile Leu Ile Glu Pro Gln Lys Gly Lys Ser Ile		
805	810	815
Gly Val Ser Glu Ile Arg Phe Glu		
820		

<210> 10198

<211> 1009

<212> PRT

<213> B.fragilis

<400> 10198

Val Cys Ser Arg Ile Leu Asn Gln Tyr Gln Thr Met Lys Lys Asn Leu			
1	5	10	15
Phe Thr Leu Cys Met Met Leu Leu Ser Met Leu Ser Phe Ala Gln			
20	25	30	
Gly Ser Leu Thr Ile Ser Gly Val Val Thr Glu Lys Lys Thr Gly Glu			
35	40	45	
Pro Ile Ile Gly Ala Ser Ile Leu Leu Lys Gly Gln Ser Ser Gly Thr			
50	55	60	
Ile Thr Asp Phe Asn Gly Asn Tyr Ser Ile Pro Asn Val Pro Ser Gly			
65	70	75	80
Ala Thr Leu Val Phe Ser Tyr Ile Gly Met Lys Thr Gln Glu Val Lys			
85	90	95	
Val Thr Ala Ser Ser Lys Leu Asp Ile Ser Leu Glu Glu Asp Asn Gln			
100	105	110	
Leu Ile Asp Glu Val Val Val Ile Gly Tyr Gly Ile Gln Arg Lys Ser			
115	120	125	
Asp Leu Thr Gly Ser Val Gly Ala Val Lys Ser Lys Asp Leu Thr Lys			
130	135	140	
Val Ala Thr Pro Asn Val Ala Asn Ala Leu Gln Gly Arg Val Ser Gly			
145	150	155	160
Val Tyr Ile Ser Ala Asn Gly Ala Pro Gly Ser Ser Pro Glu Val Arg			
165	170	175	
Ile Arg Gly Ile Gly Thr Thr Asn Asn Ser Asn Pro Leu Tyr Val Val			
180	185	190	
Asp Gly Met Phe Met Asp Asp Ile Ser Phe Leu Ser Thr His Asp Ile			
195	200	205	
Glu Ser Met Glu Val Leu Lys Asp Ala Ser Ala Thr Ala Met Tyr Gly			
210	215	220	
Ser Arg Gly Ala Asn Gly Val Ile Ile Val Thr Thr Lys Gln Gly Thr			
225	230	235	240
Glu Gly Lys Ala Val Val Asn Phe Thr Ala Ser Glu Gly Phe Gln Phe			
245	250	255	
Asn Asn Ser Ser Phe Glu Met Ala Asn Ala Thr Glu Tyr Ala Thr Leu			
260	265	270	
Leu Asn Glu Ala Leu Val Asn Thr Gly Gly Lys Pro Lys Phe Asp Asp			
275	280	285	
Pro Ala Ser Leu Gly Lys Gly Thr Asn Trp Phe Asp Glu Ile Phe Arg			
290	295	300	
Val Ala Ser Val Arg Asp Tyr Gln Leu Ser Val Ser Gly Gly Ser Glu			
305	310	315	320
Lys Val Arg Tyr Asn Leu Ser Ala Gly Tyr Tyr Gln Gln Asp Gly Ile			
325	330	335	
Ile Thr Gly Asn Thr Tyr Asn Arg Phe Thr Leu Arg Ala Asn Asn Ser			

340	345	350
Tyr Lys Ile Ser Lys Arg Leu Thr	Leu Gly His Asn Leu	Ser Ala Ser
355	360	365
Phe Ser His Lys Lys Asn Glu Asn Ser Ala Val Val	Lys Ala Ala Tyr	
370	375	380
Thr Ile Ser Pro Val Lys Arg Pro Tyr Asn Glu Asp Gly Ser Phe Met		
385	390	395
Asp Ser Glu Ser Ala Ser Ser Ala Asn Pro Val Ala Thr Leu His Tyr		
405	410	415
Thr Asn Asn Asp Asp Trp Lys Glu Arg Ile Val Gly Ser Ala Phe Leu		
420	425	430
Asn Trp Asn Ile Leu Asn Gly Leu Asp Phe Lys Thr Ser Leu Gly Ile		
435	440	445
Asp Tyr Ile Asn Gly Arg Arg Asn Phe Val Pro Lys Tyr Tyr Val		
450	455	460
Ser Glu Thr Gln Lys Asn Glu Thr Asn Ser Leu Ser Lys Thr Trp Asp		
465	470	475
Arg Asp Phe Thr Trp Leu Trp Glu Asn Leu Leu Thr Tyr Asp Trp Lys		
485	490	495
Ile Asn Asp Lys Asn Arg Leu Asn Leu Leu Gly Gly Ile Thr Ala Gln		
500	505	510
Lys Arg Val Tyr Glu Leu Leu Glu Gly Thr Gly Arg Asp Phe Phe Ser		
515	520	525
Asp Asn Glu Asn Tyr Trp Tyr Leu Asp Gln Ala Ser Ala Gly Ser Lys		
530	535	540
Ser Val Ala Asn Asn Gly Tyr His Glu Thr Met Met Ser Tyr Leu Phe		
545	550	555
Arg Ala Asn Tyr Ala Leu Met Asp Arg Tyr Leu Leu Thr Val Ser Val		
565	570	575
Arg Ala Asp Gly Ser Ser Lys Phe Gly Pro Asp Asn Arg Trp Gly Tyr		
580	585	590
Phe Pro Ser Val Ala Ala Gly Trp Arg Val Ser Glu Glu Ala Phe Leu		
595	600	605
Lys Asp Arg Val Gln Trp Leu Ser Asn Leu Lys Leu Arg Gly Ser Trp		
610	615	620
Gly Gln Ile Gly Asn Asp Lys Ile Gly Asn Asp Lys Tyr Arg Ala Leu		
625	630	635
Ala Asn Ile Ser Pro Ser Tyr Asp Ala Val Phe Gly Gly Val Phe Tyr		
645	650	655
Pro Gly Gly Thr Ile Thr Ser Leu Ser Asn Arg Ser Val His Trp Glu		
660	665	670
Arg Ser Glu Gln Met Asp Leu Gly Phe Asp Leu Gly Leu Leu Asn Asn		
675	680	685
Arg Phe Ser Leu Glu Leu Asp Tyr Tyr Arg Arg Asp Thr Lys Asp Met		
690	695	700
Leu Val Thr Val Asp Val Pro Ala Ser Val Gly Leu Thr Pro Val Glu		
705	710	715
Thr Asn Val Gly Ala Val Arg Asn Ser Gly Val Asp Phe Thr Val Lys		
725	730	735
Trp Glu Asp Ser Leu Lys Asp Phe Arg Tyr Gly Ile Arg Leu Thr Gly		
740	745	750
Thr Thr Ile Lys Asn Glu Val Ile Ser Leu Gly Gly Lys Arg Ile Ala		
755	760	765
Ser Gly Asp Ile Gly Ala Gly Lys Ser Val Gln Met Thr Glu Glu Gly		
770	775	780
Lys Pro Ile Lys Tyr Phe Tyr Gly Tyr Asn Val Ile Gly Ile Phe Gln		
785	790	795
Asn Glu Ala Gln Ile Lys Glu Tyr Asn Glu Arg Ala Ala Ala Thr		
805	810	815

Gly Asn Ser Gly Gln Gln Tyr Gln Asn Asn Val Gly Pro Gly Asp Leu
 820 825 830
 Ile Tyr Glu Asp Val Asp Gly Asp Gly Tyr Ile Thr Ala Asn Asp Arg
 835 840 845
 Lys Asp Leu Gly Ser Pro Thr Pro Lys Phe Ile Gly Gly Leu Gly Ile
 850 855 860
 Ser Ala Ser Trp Lys Gly Phe Asp Leu Ser Ile Asp Phe Gln Gly Asn
 865 870 875 880
 Phe Gly Asn Lys Ile Phe Asn Ala Lys Gln Val Glu Arg Phe Ser Gly
 885 890 895
 Ser Asp Asn Trp Asp Arg Ser Phe Leu Asp Arg Trp Thr Pro Glu Asn
 900 905 910
 Pro Asn Thr Met Thr Pro Arg Met Thr Leu Glu Gly Asn Asn Tyr Gln
 915 920 925
 Val Ser Ser Arg Tyr Val Glu Ser Gly Ser Tyr Val Lys Leu Gln Thr
 930 935 940
 Val Glu Leu Gly Tyr Thr Phe Pro Lys Ser Trp Met Gln Lys Val Ser
 945 950 955 960
 Val Gln Asn Leu Arg Val Tyr Phe Ser Gly Asn Asn Leu Ala Tyr Phe
 965 970 975
 Thr Gly Tyr Asn Gly Phe Thr Pro Glu Val Leu Gly Gly Ile Asp Arg
 980 985 990
 Gln Ile Tyr Pro Val Thr Ala Thr Cys Arg Phe Gly Leu Asn Val Thr
 995 1000 1005
 Phe

<210> 10199

<211> 576

<212> PRT

<213> B.fragilis

<400> 10199

Ile Thr Thr Met Lys Gln Leu Phe Leu Leu Leu Ala Leu Gly Ala
 1 5 10 15
 Pro Ala Leu Ala Leu Ala Gln Asp Met Arg Gln Asp Thr Tyr Cys Asn
 20 25 30
 Pro Leu Asn Ile Asp Tyr Thr Tyr Met Ile Tyr Asn Ser Asp Lys Asp
 35 40 45
 Ile Ser Tyr Arg Ser Gly Ala Asp Pro Ala Val Val Arg Phe Arg Gly
 50 55 60
 Glu Tyr Tyr Met Phe Val Thr Arg Ser Asn Gly Tyr Trp His Ser Lys
 65 70 75 80
 Asp Leu Leu Asp Trp Asp Phe Ile Ala Pro Lys Asp Trp Tyr Pro Gln
 85 90 95
 Gly Ser Asn Ala Pro Ala Ala His Asn Tyr Lys Asp Ser Val Leu Tyr
 100 105 110
 Val Thr Gly Asp Pro Ser Gly Ser Met Ser Ile Leu Tyr Ser Asp Asn
 115 120 125
 Pro Lys Ser Gly Glu Trp Lys Ala Thr Pro Ala Ile Leu His Asn Leu
 130 135 140
 Gln Asp Pro Asp Leu Phe Ile Asp Asp Asp Gly Lys Ala Tyr Met Phe
 145 150 155 160
 Trp Gly Ser Ser Asn Val Tyr Pro Ile Arg Gly Met Glu Leu Asp Lys
 165 170 175
 Asn His Arg Phe Leu Pro Lys Gly Glu Val Lys Glu Leu Phe Asn Leu
 180 185 190
 Asp Met Pro Arg His Gly Trp Glu Arg Phe Gly Glu Asn His Ser Asp
 195 200 205

Thr Val Leu Gly Gly Tyr Ile Glu Gly Pro Trp Leu Thr Lys Tyr Asn
 210 215 220
 Gly Lys Tyr Tyr Met Gln Tyr Gly Ala Pro Gly Thr Glu Phe Asn Val
 225 230 235 240
 Tyr Ala Asp Gly Val Tyr Val Ala Asp His Pro Met Gly Pro Tyr Thr
 245 250 255
 Tyr Gln Lys His Asn Pro Val Ser Tyr Lys Pro Gly Gly Tyr Met Asn
 260 265 270
 Gly Ala Gly His Gly Ser Thr Val Gln Gly Pro Gly Gly Glu Tyr Trp
 275 280 285
 His Phe Ala Ser Met Ala Leu Ser Ile Asn Val Asn Trp Glu Arg Arg
 290 295 300
 Leu Cys Met Phe Pro Ala Gly Phe Asp Lys Asp Gly Ile Met Tyr Val
 305 310 315 320
 Asp Thr Arg Phe Gly Asp Tyr Pro Arg Tyr Ala Pro Ala Val Pro Gly
 325 330 335
 Lys Lys Gly Gln Phe Arg Gly Trp Met Leu Leu Ser Tyr Arg Lys Pro
 340 345 350
 Val Thr Ala Ser Thr Ala Lys Gly Glu Phe Gly Pro Asp Ala Leu Thr
 355 360 365
 Asp Glu Arg Thr Lys Ser Phe Trp Leu Ala Glu Ala Asn Asp Glu Arg
 370 375 380
 Gln Trp Val Leu Ile Asp Leu Glu Lys Pro Ala Arg Val Cys Ala Val
 385 390 395 400
 Gln Val Asn Tyr His Asp Tyr Arg Ser Asn Leu Tyr Gly Arg Ile Pro
 405 410 415
 Gly Leu Arg His Arg Tyr Val Ile Glu Gly Ser Ser Asp Gly Glu Thr
 420 425 430
 Trp Asn Ile Leu Val Asp Arg Arg Ser Ser Tyr Lys Asp Thr Pro Asn
 435 440 445
 Asp Tyr Val Glu Leu Glu Val Pro Thr Thr Ala Arg Tyr Ile Arg Tyr
 450 455 460
 Lys Asn Ile Asp Val Pro Thr Pro Asn Leu Ala Ile Ser Glu Leu Arg
 465 470 475 480
 Val Phe Gly Leu Gly Phe Gly Lys Ala Pro Arg Ser Pro Gln Lys Leu
 485 490 495
 Ala Leu Asp Arg His Thr Asp Arg Cys Asp Val Thr Val Arg Trp Glu
 500 505 510
 Pro Val Lys Gly Ala Gln Gly Tyr Asn Val Leu Trp Gly Ile Ala Pro
 515 520 525
 Asp Lys Leu Tyr Ser Ser Trp Met Val Tyr Gly Gly Asn Glu Leu Glu
 530 535 540
 Met Lys Ser Leu Thr Ile Asp Gln Asp Tyr Tyr Phe Ala Val Glu Ala
 545 550 555 560
 Phe Asn Glu Asn Gly Val Ser Leu Pro Ser Glu Thr Lys Tyr Val Glu
 565 570 575

<210> 10200

<211> 514

<212> PRT

<213> B.fragilis

<400> 10200

Val Arg Arg Met Ser Phe Ile Pro Asn Lys Glu Glu Ile Ala Ser Leu
 1 5 10 15
 Glu Tyr Tyr Glu Glu Asn Tyr Val Trp Gly Gln Leu Gln Arg Thr Asp
 20 25 30
 Glu Glu Tyr Pro Tyr Pro Tyr Gly Ile Tyr Gly Ser Glu Asn Trp Tyr
 35 40 45

Gln Asn Arg Ser Gly Lys Tyr Gly Gly Tyr Glu Asp Gly Gly Ser Gly
 50 55 60
 Lys Gly Arg Met Trp Arg Thr Phe Asp Tyr Thr Thr His Phe Ala Ile
 65 70 75 80
 Tyr Tyr Asn Leu Tyr Arg Ile Ala Glu Asp Asn Pro Glu Met Val Ser
 85 90 95
 Tyr Leu Asp Ala Asp Gly Tyr Leu Glu Arg Ala Tyr Arg Thr Ala Ile
 100 105 110
 Ala Tyr Phe Glu Val Pro Tyr Asn Ile Leu Met Gly Lys Gln Trp Ala
 115 120 125
 Phe His Gly Trp Thr Asp Trp Ala Tyr Lys Gln Gly Asn Phe His Glu
 130 135 140
 Arg Tyr Leu Leu Asp Ile Ile Asn Ala Leu Gln Gln Lys Gly Arg Leu
 145 150 155 160
 Lys Asp Ala Ala Lys Leu Arg Arg Glu Trp Glu Lys Lys Val Thr Tyr
 165 170 175
 Met Val Tyr Glu Asp Pro Trp Pro Phe Gly Ser Glu Met Phe Val Asp
 180 185 190
 Arg Thr Ala Phe Glu Ser Ser Tyr Tyr Val Ala Glu Tyr Ala Lys Leu
 195 200 205
 Asn Pro Ile Lys Pro Glu Glu Gln Phe Trp Tyr Asp Lys Asn Arg Lys
 210 215 220
 Lys Trp Tyr Ser Tyr Thr Ser Phe Asp Thr Ser Met Ile Asp Arg Phe
 225 230 235 240
 Met Gln Asn Gln Leu Asp Gly Asn Leu Ala Leu Arg Gly Leu Phe Glu
 245 250 255
 Pro Gly Tyr Ala Asn Leu Gly Thr Ala Trp Ser Gly Gln Tyr Val Asn
 260 265 270
 Leu Asp Tyr Met Thr Gln Met Gly Gly Val Ala Leu Leu Asp Tyr Ala
 275 280 285
 Tyr Arg Phe Ser Asp Arg Pro Asp Arg Tyr Ile Asn Tyr Gly Tyr Asn
 290 295 300
 Ser Leu Leu Ala Ser Trp Ala Leu Met Asn Thr Gly Thr Lys Lys Thr
 305 310 315 320
 Asp Phe Gly Tyr Trp Tyr Arg Gly Glu Gln Asn Asp Gly Ala Val Gly
 325 330 335
 Trp Ala Phe Ser Pro Tyr Gln Asn Ser Arg Thr Tyr Met Asn Tyr Ile
 340 345 350
 Lys Val Gly Arg Ala Pro Trp Arg Phe Asp Gly Glu Ile Asp His Gly
 355 360 365
 Leu Thr Gly Gly Ile His Gly Ser Gly Val Tyr Leu Leu Asp Asp Pro
 370 375 380
 Asp Phe Gly Leu Ile Gly Tyr Gly Gly Asn Val Arg Met Asp Lys Asp
 385 390 395 400
 Gly Thr Val Ser Ile Ile Pro Phe Asp Gly Val Arg Arg Gln Val Arg
 405 410 415
 Ile Met Thr Pro Val Arg Phe Ser Val Glu Leu Met Gln Asp Gly Phe
 420 425 430
 Arg Lys Asp Tyr Pro Ile Thr Leu Arg Gly Thr Glu Glu Leu Ser Phe
 435 440 445
 Cys Ile Glu Asn Arg Ser Asp Lys Pro His Asn Thr Thr Ile Arg Ala
 450 455 460
 Glu Gly Met Pro Glu Gly Lys Tyr Thr Val Met Thr Asp His Lys Met
 465 470 475 480
 Ile Thr Thr Phe Asn Ile Glu Ala Gly Asn Ala His His Pro Tyr Tyr
 485 490 495
 Ile Glu Val Pro Val Thr Asp Lys His Thr Gln Val Lys Leu Leu Lys
 500 505 510
 Thr Asn

<210> 10201

<211> 437

<212> PRT

<213> B.fragilis

<400> 10201

Asn	Leu	Glu	Leu	Leu	Thr	Thr	Thr	Met	Lys	His	Thr	Leu	Leu	Phe	Leu	Leu
1					5						10					15
Met	Ile	Cys	Ala	Cys	Thr	Leu	Gln	Ala	Thr	Ala	Thr	Gly	Lys	Gln	Pro	
						20					25					30
Arg	Leu	Thr	Asp	Asp	Glu	Leu	Met	Thr	Leu	Val	Gln	Lys	Gln	Thr	Phe	
						35					40					45
Arg	Tyr	Phe	Trp	Asp	Phe	Ala	His	Pro	Glu	Ser	Gly	Leu	Ala	Arg	Glu	
						50					55					60
Arg	Ser	Asn	Asp	Arg	Leu	Glu	Ile	Ala	Thr	Ile	Gly	Gly	Ser	Gly	Phe	
						65					70					80
Gly	Val	Met	Ala	Ile	Ile	Val	Gly	Val	Glu	Arg	Gly	Phe	Ile	Thr	Arg	
						85					90					95
Glu	Gln	Gly	Ala	Glu	Arg	Leu	Leu	Lys	Ile	Val	Glu	Phe	Leu	Asn	Lys	
						100					105					110
Ala	Asp	Ser	Tyr	His	Gly	Ile	Trp	Ala	His	Trp	Met	Asp	Gly	Thr	Thr	
						115					120					125
Gly	Lys	Thr	Ile	Pro	Phe	Ser	Arg	Lys	Asp	Asp	Gly	Ala	Asp	Leu	Val	
						130					135					140
Glu	Ser	Ala	Phe	Met	Phe	Glu	Gly	Leu	Leu	Ala	Ala	His	Gln	Tyr	Phe	
						145					150					160
Thr	His	Asp	Asn	Pro	Thr	Glu	Asn	Arg	Ile	Arg	Gly	Leu	Ile	Asn	Thr	
						165					170					175
Leu	Trp	His	Gln	Ala	Glu	Trp	Asp	Trp	Phe	Thr	Arg	Gly	Glu	Asp		
						180					185					190
Val	Leu	Tyr	Trp	His	Trp	Ser	Pro	Asn	Asn	Gly	Trp	Ala	Met	Asn	His	
						195					200					205
Gln	Leu	Lys	Gly	Gln	Asn	Glu	Cys	His	Ile	Thr	Tyr	Ile	Leu	Ala	Ala	
						210					215					220
Ser	Ser	Pro	Thr	Tyr	Pro	Ile	Arg	Glu	Ser	Val	Tyr	His	Lys	Gly	Trp	
						225					230					240
Ala	Asn	Ser	Ile	Thr	Phe	Lys	Asn	Gly	Lys	Glu	Tyr	Tyr	Gly	Ile	Arg	
						245					250					255
Leu	Pro	Leu	Gly	Thr	Asp	Phe	Gly	Gly	Pro	Leu	Phe	Phe	Thr	His	Tyr	
						260					265					270
Ser	Tyr	Leu	Gly	Leu	Asp	Pro	Arg	Gly	Leu	Lys	Asp	Ser	Tyr	Ala	Asp	
						275					280					285
Tyr	Gly	Glu	Gln	Met	Lys	Ala	His	Thr	Leu	Ile	Asn	Arg	Ala	Tyr	Cys	
						290					295					300
Ile	Asp	Asn	Pro	Lys	Lys	Tyr	Lys	Gly	Tyr	Gly	Arg	Lys	Cys	Trp	Gly	
						305					310					320
Leu	Thr	Ala	Ser	Asp	Asn	His	Gln	Gly	Tyr	Ser	Ala	His	Cys	Pro	Gln	
						325					330					335
Asn	Asp	Leu	Gly	Val	Ile	Thr	Pro	Thr	Ala	Ala	Ile	Ser	Ser	Ile	Pro	
						340					345					350
Tyr	Thr	Pro	Glu	His	Ser	Leu	Glu	Ala	Met	Arg	Tyr	Phe	Tyr	Glu	Glu	
						355					360					365
Leu	Gly	Asp	Arg	Leu	Trp	Gly	Glu	Tyr	Gly	Phe	Lys	Asp	Ala	Phe	Asn	
						370					375					380
Leu	Thr	Glu	Asn	Trp	Phe	Ala	Ser	Ser	Tyr	Leu	Ala	Ile	Asp	Gln	Gly	
						385					390					400
Pro	Ile	Ile	Val	Met	Ile	Glu	Asn	Tyr	Arg	Ser	Gly	Leu	Ile	Trp	Lys	

405	410	415
Leu Phe Met Ser His Pro Asp Val Gln Arg Gly Leu Lys Arg Leu Gly		
420	425	430
Phe Gly Ser Glu Glu		
435		

<210> 10202

<211> 113

<212> PRT

<213> B.fragilis

<400> 10202

Ser Leu His Ala Pro Gln Leu Pro Phe His Tyr Gly Tyr Pro Cys Arg			
1	5	10	15
Glu Lys Tyr Val His His Thr Tyr His Pro Thr Ala Met Ser His Thr			
20	25	30	
Gly Tyr Asn Tyr Gly His Tyr Gln Pro Phe Arg Leu His Gly Pro Thr			
35	40	45	
His Ser Asp Arg Leu Ser Ser Ser Val Asn Asn Tyr Lys Tyr Ile			
50	55	60	
Gly Tyr Asn Tyr Ser Glu Tyr Thr Asp Pro Arg Ser Ser Gly Glu			
65	70	75	80
Gly Val Asp Gly Arg Met Arg Glu Tyr Gln Thr Thr Val Arg Arg			
85	90	95	
Tyr Ser Asn His Met Ile Arg Phe Asn Lys Met Phe Gly Lys His Ser			
100	105	110	
Ile			

<210> 10203

<211> 89

<212> PRT

<213> B.fragilis

<400> 10203

Arg Met Lys Asn Ser Ala Cys His Cys Val Leu Val Arg Val Ala Glu			
1	5	10	15
Lys Ala Asp Asn Ala Arg Asn Tyr Ser Gln Cys Asp Ser Leu Leu Leu			
20	25	30	
Gly Asp Lys Cys Gly Ala His Thr Phe Pro Tyr Met Asp Ile His Asn			
35	40	45	
Glu Thr Ala Val Val Glu His Glu Ala Thr Thr Ser Lys Ile Ser Glu			
50	55	60	
Asp Gln Ile Phe Tyr Cys Asn Gln Gly Gly Thr Asn Gly Phe Pro Arg			
65	70	75	80
Gly Leu Gln Arg Ala Ala Leu Phe Ile			
85			

<210> 10204

<211> 77

<212> PRT

<213> B.fragilis

<400> 10204

Arg Leu Ile Asp Thr Ala Ser Val Tyr Gly Asn Glu Arg Ala Val Gly			
1	5	10	15
Met Ala Ile Arg Lys Ser Gly Ile Pro Arg Glu Glu Leu Phe Ile Thr			
20	25	30	
Thr Lys Ala Trp Ile Ser Glu Met Gly Tyr Glu Arg Thr Leu Arg Ala			

35	40	45
Leu Asp Thr Ser Leu Ala Arg Leu Gly Leu Asp Tyr Leu Asp Val Tyr		
50	55	60
Ile Glu Cys Leu Pro Asn Ile Leu Leu Lys Arg Ile Ile		
65	70	75

<210> 10205

<211> 187

<212> PRT

<213> B.fragilis

<400> 10205

Gly Ala Ala Pro Ser Ser Pro Val Val Lys Thr Phe Ala Asp Gly Phe			
1	5	10	15
Glu Glu Ile Glu Ala Leu Thr Thr Ile Asp Thr Leu Arg Arg Ala Gly			
20	25	30	
Leu Asp Val Glu Ile Val Ser Val Thr Pro Asp Glu Ile Val Val Gly			
35	40	45	
Ala His Asp Val Ser Val Leu Cys Asp Lys Asn Phe Glu Asn Cys Asp			
50	55	60	
Phe Phe Asp Ala Glu Leu Leu Phe Leu Pro Gly Met Pro Gly Ala			
65	70	75	80
Ala Thr Leu Asp Lys His Glu Gly Leu Arg Lys Leu Ile Leu Ser Phe			
85	90	95	
Ala Glu Lys Asn Lys Pro Ile Ala Ala Ile Cys Ala Ala Pro Met Val			
100	105	110	
Leu Gly Lys Leu Gly Leu Leu Lys Gly Arg Arg Val Thr Cys Tyr Pro			
115	120	125	
Ser Phe Glu Gln Tyr Leu Asp Gly Ala Asp Cys Thr Asn Glu Pro Val			
130	135	140	
Val Arg Asp Gly Asn Ile Ile Thr Gly Met Gly Pro Gly Ala Ala Met			
145	150	155	160
Glu Phe Ala Leu Thr Ile Val Asp Thr Leu Leu Gly Lys Glu Lys Val			
165	170	175	
Asn Glu Leu Val Glu Ala Met Cys Val Arg Arg			
180	185		

<210> 10206

<211> 134

<212> PRT

<213> B.fragilis

<400> 10206

Asp Cys Thr His Phe Gln Val Phe Ile Phe Met Glu Phe Arg Arg Asp			
1	5	10	15
Asn Phe Pro Phe Leu Leu Thr Lys Asn Gln Phe Met Lys Lys Val Leu			
20	25	30	
Phe Ile Leu Leu Gly Cys Leu Leu Ser Phe Asn Val Met Ala Gln Val			
35	40	45	
Lys Ala Ile Ser Gly Leu Val Thr Asp Val Thr Gly Glu Pro Val Ile			
50	55	60	
Gly Ala Ser Val Val Glu Val Gly Thr Thr Asn Gly Val Ile Thr Asp			
65	70	75	80
Leu Asn Gly Lys Phe Ser Leu Lys Val Ala Pro Asn Ser Gln Phe Leu			
85	90	95	
Val Ser Tyr Ile Gly Tyr Lys Gln Gln Thr Ile Lys Val Gly Ser Glu			
100	105	110	
Ser Thr Tyr Asn Ile Val Phe Thr Thr Gly Leu Glu Gly Ser Ala Leu			
115	120	125	

Ala Ile Arg Ser Glu Asn
130

<210> 10207

<211> 70

<212> PRT

<213> B.fragilis

<400> 10207

Ser Pro Leu Ser Val Ser Val Arg Phe Pro Ser Ala Leu Ser Ala Gly
1 5 10 15
Asn Gly Asp Val Arg Gly Leu Trp Leu Gly Ala Gly Leu Val Ser Leu
20 25 30
Gly Ala Ala Phe Leu Leu Asp Lys Lys Tyr Glu Met Thr Ser Asp Leu
35 40 45
Tyr Pro Val Asn Val Cys Tyr Asn Val Met Leu Ala Val Glu Pro Glu
50 55 60
Cys Pro Asp Ser Arg Leu
65 70

<210> 10208

<211> 374

<212> PRT

<213> B.fragilis

<400> 10208

Glu Asp Ile Thr His Ile Pro Val Ile Glu Asp Ser Ala Ser Val Ser
1 5 10 15
Val Thr Ala Asp Ser Val Ala Val Lys Arg Ser Phe Phe Lys Lys Phe
20 25 30
Leu Asp Tyr Phe Asn Asp Ala Asn Lys Glu Lys Lys Asn Lys Lys Phe
35 40 45
Asp Phe Ser Val Ile Gly Gly Pro His Tyr Ser Ser Asp Thr Lys Leu
50 55 60
Gly Leu Gly Leu Val Ala Ala Gly Leu Tyr Arg Thr Asp Arg Ala Asp
65 70 75 80
Thr Leu Leu Pro Leu Ser Thr Val Ser Leu Tyr Gly Asp Val Ser Thr
85 90 95
Val Gly Phe Tyr Leu Leu Gly Val Arg Gly Ser His Ile Phe Pro Lys
100 105 110
Asp Lys Tyr Arg Leu Asn Tyr Asn Leu Tyr Phe Tyr Ser Phe Pro Ser
115 120 125
Leu Tyr Trp Gly Val Gly Tyr Arg Asn Ala Val Asn Asp Glu Asn Glu
130 135 140
Ser Ser Tyr Lys Arg Phe Gln Ala Gln Val Lys Val Asp Phe Met Phe
145 150 155 160
Arg Met Ala Lys Asn Phe Tyr Leu Gly Pro Met Ala Ser Phe Asp Tyr
165 170 175
Ile Asp Gly Arg Asn Phe Glu Lys Pro Glu Leu Trp Gln Gly Met Asp
180 185 190
Ala Arg Thr Ser Asn Val Ser Ala Gly Leu Ser Leu Val Tyr Asp Ser
195 200 205
Arg Asp Phe Leu Thr Asn Ala Tyr Lys Gly Tyr Tyr Leu Arg Ile Asp
210 215 220
Gln Arg Phe Ser Pro Ala Phe Leu Gly Asn Asp Tyr Ala Phe Ser Ser
225 230 235 240
Thr Glu Leu Thr Thr Ser Tyr Tyr Arg Arg Val Trp Lys Gly Gly Ile
245 250 255
Leu Ala Gly Gln Phe His Thr Leu Leu Thr Tyr Gly Asn Pro Pro Trp

260	265	270
Gly Leu Met Ala Thr Leu Gly Ser Ser Tyr Ser Met Arg Gly Tyr Tyr		
275	280	285
Asp Gly Arg Tyr Arg Asp Lys Asn Val Val Asp Met Gln Val Glu Leu		
290	295	300
Arg Gln His Val Trp Lys Arg Asn Gly Val Ala Val Trp Val Gly Ala		
305	310	315
Gly Asn Val Phe Pro Asp Phe Ser Ser Phe Lys Val Lys His Ile Leu		
325	330	335
Pro Asn Tyr Gly Phe Gly Tyr Arg Trp Glu Phe Lys Lys Arg Val Asn		
340	345	350
Val Arg Leu Asp Leu Gly Phe Gly Lys Gly Gln Thr Gly Phe Ile Phe		
355	360	365
Asn Ile Asn Glu Ala Phe		
370		

<210> 10209

<211> 69

<212> PRT

<213> B.fragilis

<400> 10209

Leu Lys Arg Ala Pro Gly Asn Pro Pro Asn Gly Gly Lys Gln Leu Pro			
1	5	10	15
Gln Leu Phe Leu Gln Lys Lys Phe Phe Ser Pro Val Ser Gln Arg Lys			
20	25	30	
Lys Gly Lys Tyr Arg Ala Arg Asn Thr Leu Phe Asn Glu Lys Arg Pro			
35	40	45	
Tyr Ile Thr Leu Glu Lys Lys Phe Val Gly Tyr Lys Glu Met Glu Trp			
50	55	60	
Ser Lys Ala Ile Asn			
65			

<210> 10210

<211> 187

<212> PRT

<213> B.fragilis

<400> 10210

Gly Leu Glu Lys Ala Arg Pro Asp Leu Tyr Leu Ile Ser Met Lys Leu			
1	5	10	15
Phe Asn Ser Ile Lys Lys Trp Phe Gly Asn Gln Glu Asn Leu Phe Tyr			
20	25	30	
Leu Phe Leu Phe Val Leu Ile Val Pro Asn Val Val Leu Cys Phe Thr			
35	40	45	
Glu Pro Leu Pro Leu Val Ala Lys Ile Ala Asn Val Leu Leu Pro Leu			
50	55	60	
Gly Cys Tyr Tyr Leu Ile Met Thr Leu Ser Arg Asn Cys Gly Lys Met			
65	70	75	80
Leu Trp Ile Leu Phe Leu Phe Val Phe Phe Gly Ala Phe Gln Ile Val			
85	90	95	
Leu Leu Tyr Leu Phe Gly Gln Ser Ile Ile Ala Val Asp Met Phe Leu			
100	105	110	
Asn Leu Ala Thr Thr Asn Ser Ser Glu Ala Met Glu Leu Leu Asp Asn			
115	120	125	
Leu Leu Pro Ala Leu Ile Thr Ile Val Ile Leu Tyr Ile Pro Ala Leu			
130	135	140	
Ile Leu Gly Met Ile Ser Ile Val Arg Lys Arg Thr Leu Ser Val Gly			
145	150	155	160

Phe Ile Arg Arg Glu Arg Arg Arg Ala Trp Val Val Ala Gly Cys Arg
 165 170 175
 Ser Gly Ile Val Gly Ser Gly Leu Pro Val Gly
 180 185

<210> 10211

<211> 68

<212> PRT

<213> B.fragilis

<400> 10211

Arg Asp Phe Glu Gly Phe His Phe His Cys Arg Arg Thr His Pro Ala
 1 5 10 15
 Glu Asp Arg Glu Ile Tyr Val Leu Val Val Gly Glu Thr Ser Arg Ala
 20 25 30
 Leu Asn Trp Ser Leu Tyr Gly Tyr Asp Arg Glu Thr Asn Pro Lys Leu
 35 40 45
 Ser Glu Val Ser Gly Leu Thr Ala Phe Thr Asn Val Pro Asp Pro Ile
 50 55 60
 Glu Tyr Asn Ser
 65

<210> 10212

<211> 133

<212> PRT

<213> B.fragilis

<400> 10212

Arg Leu Leu Arg Met Cys Leu Thr Gln Ser Asn Thr Thr His Lys Met
 1 5 10 15
 Val Pro Met Leu Met Ser Ala Val Ser Ala Glu Asn Phe Asp Ser Ile
 20 25 30
 Tyr His Gln Lys Gly Ile Ile Thr Ala Phe Lys Asp Ala Gly Phe Arg
 35 40 45
 Thr Ala Phe Phe Ser Asn Gln Gly Tyr Asn Thr Ser Phe Ile Asp Cys
 50 55 60
 Phe Gly His Glu Ala Asp His Cys Asp Phe Ile Lys Glu Asp Pro Leu
 65 70 75 80
 Thr Ala Gly Gln Asn Leu Ser Asp Asp Tyr Leu Asp Asp Leu Val Gln
 85 90 95
 Glu Val Leu Ala Thr Gly Thr Arg Lys Arg Phe Ser Arg Leu Tyr Pro
 100 105 110
 Ser Gly Ile His Leu Asn Asn Arg Asn Arg Met Leu Val Gln Thr Ser
 115 120 125
 Leu Ile Leu Ala Glu
 130

<210> 10213

<211> 107

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (44),(54),(70),(83)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10213

Pro Ser Ser Ser Gln Lys Arg Thr Phe Ser Cys Thr Leu Ser Gly Leu

1	5	10	15
Tyr Ser Lys Arg Leu Leu Pro Gly Ile Leu Leu Val Ser Leu Arg Gly			
20	25	30	
Gly Lys Leu Lys Ser Glu Phe Phe Ser Pro Ala Xaa Arg Ile Ile Glu			
35	40	45	
Thr Ser Ser Pro Arg Xaa Ile Ile Glu Thr Pro Pro Ile Ala Tyr Phe			
50	55	60	
Asn Leu Phe Ile His Xaa Glu Lys Ser Met Ser Gly Gly Val Leu Val			
65	70	75	80
Thr Val Xaa Ile Glu Ile Leu Ser Ser Ser Asn Asn Phe Asn Asp Ser			
85	90	95	
Ser Asn Leu Phe Gly Gln Ser Leu Glu Val Thr			
100	105		

<210> 10214

<211> 288

<212> PRT

<213> B.fragilis

<400> 10214

Ser Pro Ile Lys Phe Leu Phe Ser Tyr Lys Pro Lys Arg Ile Phe Leu			
1	5	10	15
Ile Asp Leu Met Ala Leu Ser Asp Tyr Val Thr Ser Lys Asp Cys Pro			
20	25	30	
Asn Lys Phe Glu Glu Ser Leu Lys Leu Phe Asp Glu Asp Arg Ile Ser			
35	40	45	
Ile Phe Thr Val Thr Asn Thr Pro Pro Asp Ile Asp Phe Ser Ile Trp			
50	55	60	
Ile Asn Lys Leu Lys Tyr Ala Ile Gly Gly Val Ser Met Ile Lys Arg			
65	70	75	80
Gly Asp Glu Val Ser Met Ile Leu Leu Ala Gly Glu Lys Asn Ser Asp			
85	90	95	
Leu Ser Leu Pro Pro Leu Lys Glu Thr Lys Arg Ile Pro Gly Lys Ser			
100	105	110	
Arg Leu Glu Tyr Ser Pro Asp Arg Val Gln Glu Lys Val Arg Phe Trp			
115	120	125	
Asp Asp Glu Gly Tyr Trp Lys Thr Ile Ile Leu Leu Arg Phe Asp Val			
130	135	140	
Leu Thr Met Glu Leu Asp Ala Lys Phe Ile Asn Lys Asp Met Gly Asn			
145	150	155	160
Ser Phe Ser Val Leu Thr Asp Tyr Ile Glu Ser Phe Leu Ser Glu Lys			
165	170	175	
Gly Glu Phe Leu Phe Pro Glu Ala Glu Asn Tyr Leu Asn Glu Gln Lys			
180	185	190	
Val Lys Ile Gln Asn Tyr Tyr Pro Leu Phe Glu Ile Ala Arg Thr Cys			
195	200	205	
Leu His Leu Leu Ser Tyr Val Glu Lys Tyr Thr Asp Ser Leu Ser Ser			
210	215	220	
Glu Glu His Ile Thr Val Leu Gly His Glu Pro Ile Lys Pro Arg Phe			
225	230	235	240
Phe Lys Lys Asp Lys Met Val Pro Pro Lys Tyr Glu Leu Arg Lys Arg			
245	250	255	
Asp Val Trp Asn Leu Lys Arg Gln Arg Asp Asn Tyr Ser Ser Ile			
260	265	270	
Ile Thr Phe Lys Ser Ser Pro Arg Gly Trp Lys Tyr Gln Arg Cys Ser			
275	280	285	

<210> 10215

<211> 210

<212> PRT
 <213> B.fragilis

<400> 10215

Asn Ala Tyr Asn Met Lys Glu His Ser Ile Lys Ala Val Arg Leu Thr
 1 5 10 15
 Pro Thr Val Lys Ala Arg Leu Asp Thr Phe Lys Gly Ser Asp Thr Val
 20 25 30
 Ser Val Cys Ile Asp Arg Met Ile Thr Phe Phe Glu Ile Thr Gly Phe
 35 40 45
 Asn Pro Arg Tyr Ala Ser Arg Asn Pro Thr Ala Leu Val Glu Lys Arg
 50 55 60
 Ile Glu Asp Val Val Arg Ile Ile Lys Ser Gln Glu Arg Asp Ile Leu
 65 70 75 80
 Lys Pro Val Leu Glu Lys Leu Ser Ala Ile Asn Asn Thr Pro Gln Glu
 85 90 95
 Ser Pro Asp Tyr Ala Arg Leu Met Asn Glu Phe Arg Asp Leu Lys Asp
 100 105 110
 Glu Asn Arg Lys Leu Lys Glu Arg Leu Gln Ala Asp Asp Leu His Thr
 115 120 125
 Gln Asp Ala Ala Val Tyr His Asp Lys Leu Lys Arg Leu Gly Asp Leu
 130 135 140
 Leu Lys Tyr Gln Leu Asp Pro Glu Lys Phe Ser Thr Ile Lys Tyr Ser
 145 150 155 160
 Asp Asp Val Arg Val Pro Val Asn Thr Leu Gln Leu Leu Ile Lys Lys
 165 170 175
 Ile Asn Glu Glu Tyr Val Leu Val Asn Arg Ile Gly Arg Tyr Thr Leu
 180 185 190
 Arg Thr Tyr Arg Ile Thr Lys Ile Asn Ala Pro Gly Leu Val Asp Tyr
 195 200 205
 Ser Glu
 210

<210> 10216

<211> 104
 <212> PRT
 <213> B.fragilis

<400> 10216

Tyr Pro Ile Pro Thr Cys Met Met Ser Ala Leu Ser Phe Ile Leu Tyr
 1 5 10 15
 Pro Glu Arg Ser Lys Phe Ala Leu Lys Asn Lys Arg Met Lys Gly Leu
 20 25 30
 Thr Glu Leu Ile Val Ala Gly Cys Ile Leu Phe Gly Leu Leu Leu Thr
 35 40 45
 Pro Leu Val Phe Ser Ile Leu Asp Phe Ile Ser Gly Val Arg Lys Ala
 50 55 60
 Arg Gln Arg Gly Glu Arg Ile Thr Ser Asp Arg Tyr Arg Arg Ser Val
 65 70 75 80
 Lys Lys Gly Pro Val Ile Lys Pro Ala Ala Val Ser Pro Gly Val Glu
 85 90 95
 Asp Ser Gly Val Arg Lys Val Ser
 100

<210> 10217

<211> 276
 <212> PRT
 <213> B.fragilis

<400> 10217

Lys Ser Arg Tyr Met Asn Asn Tyr Val Lys Thr Ser Val Pro Arg Pro
 1 5 10 15
 Val Gly Asn Pro Gly Asn Gly Ile Asn Pro Lys Asp Val Leu Thr Leu
 20 25 30
 Ile Asp Ile Asp Asp Leu Val Tyr Phe Pro Pro Arg Asp Gly Ala Gly
 35 40 45
 Val Val Leu Glu Gly Asp Ile Val Val Lys Pro Ser Ala Tyr Ser Thr
 50 55 60
 Asp Leu Tyr Leu Thr Pro Gly Thr Val Glu Leu Ser Ser Asn Gly Glu
 65 70 75 80
 Gly Glu Thr Asp Ala Lys Gly Phe Thr Pro Ser Val Lys Gly Lys His
 85 90 95
 Pro Gly Asn Lys Gln Glu Val Arg Glu Phe Lys Thr Asn Trp Leu Gly
 100 105 110
 Arg His Cys Ile Ala Ile Leu Gln Tyr Cys Asn Gly Gln Asp Pro Asp
 115 120 125
 Ile Leu Gly Ser Pro Cys Asn Pro Leu Glu Met Ser Val Asn Tyr Thr
 130 135 140
 Gly Asn Lys Asp Gly Asn Ala Ser Glu Phe Thr Phe Thr Gln Ile Ser
 145 150 155 160
 Lys Gly Asp Asp Ile Gly Ile Tyr Lys Gly Thr Ile Pro His Glu Glu
 165 170 175
 Pro Val Ala Thr Val Pro Ala Ser Ala Thr Glu Ile Pro Phe Lys Gly
 180 185 190
 Arg Gly Gln Tyr Gln Leu Ser Ala Gly Ala Ala Lys Ile Ala Thr Ile
 195 200 205
 Lys Gly Ala Lys His Gly Asp Leu Phe Thr Leu Leu Gly Val Val Ser
 210 215 220
 Gly Val Ala Pro Thr Ile Glu Lys Ala Gly Gln Thr Ala Phe Met Leu
 225 230 235 240
 Lys Asn Gly Lys Thr Phe Thr Ala Ser Pro Gly Ser Gln Ile Thr Phe
 245 250 255
 Lys Ala Phe Asp Thr Gly Gly Ala Ile Gln Cys Val Glu Gln Ser
 260 265 270
 Arg Phe Glu Val
 275

<210> 10218

<211> 61
 <212> PRT
 <213> B.fragilis

<400> 10218

Asn Gly Ile Gln Lys Lys Lys Leu Ile Phe His Arg Arg Arg Leu Glu
 1 5 10 15
 Ile Lys Arg Ala Ser Trp Leu Lys Met Gly Thr Arg Tyr Leu His Pro
 20 25 30
 Cys Asp Arg Ser Glu Ala Gly Met Gln Ala Arg Lys Leu Asp Asn Glu
 35 40 45
 Ile Leu Ser Cys Asn Asn Arg Leu Met Asn Leu Tyr Glu
 50 55 60

<210> 10219

<211> 495
 <212> PRT
 <213> B.fragilis

<400> 10219

Leu Phe Leu His Val Gln Thr Leu Val Lys Asn Ser Phe Arg Arg Pro
 1 5 10 15
 Arg Arg Ser Glu Ala Glu Arg Gln Leu Pro Glu Gly Gln Met Val Lys
 20 25 30
 Tyr Asp Tyr Ile Lys Gly Arg Gln Ala Glu Gly Leu Gly Thr Lys Asn
 35 40 45
 Arg Phe Arg Tyr Phe Arg Lys Arg Ser Gly Lys Thr Arg Gln Leu Pro
 50 55 60
 Phe Leu Ser Pro Arg Gln Val Ile Glu Ser Gly His Val Gly Thr Gly
 65 70 75 80
 Pro Ala Ala Ala Gly Leu Ala Pro Asp Gly Thr Pro Pro Gly Pro Pro
 85 90 95
 His His Gln Val Leu Glu Gly Val Gly Glu Val Arg Gly Glu His Gly
 100 105 110
 Gln Phe Leu Gly Leu Gln Leu Leu Gly Leu Leu Asp Leu Val Asp Asp
 115 120 125
 Leu Leu Leu Ser Leu Val Thr Asp Thr Arg Arg Arg Leu Leu Asp Thr
 130 135 140
 Gly Asp Gly Leu Ala Thr Val His Arg Val Asn Lys Gln Ser Gly Glu
 145 150 155 160
 Gly Val Val Val Ala Cys His Gln Leu Leu His Glu Ile Val Leu Phe
 165 170 175
 Ile Leu Ala Asp Ile Gly Leu Phe Ala Ala His Gln Val Asp Asn Pro
 180 185 190
 Ser Arg Ala Val Thr Val Thr Val Tyr Leu Asp Gly Leu Leu Glu Leu
 195 200 205
 Ala Gly Val Ile Leu Phe Leu Leu Leu Glu Val Ile Ala Arg Pro Val
 210 215 220
 Val Ile Gln Val Gln Phe Leu Leu Leu Met Val Lys Glu Glu Cys Gln
 225 230 235 240
 Glu Leu Val Gly Gln Leu Pro Glu Pro Ser Gly Arg Lys Leu Val Lys
 245 250 255
 Val Leu Val Lys Ala Val Gln Arg Ser Val Leu Leu Ser Tyr Tyr Gln
 260 265 270
 Gly Gln Leu Val Thr Glu Val His Ala Ala Val Asp Gly Leu Ala Ala
 275 280 285
 Pro Glu Glu Thr Gln Val Gln Ala Ala Leu Cys Arg Phe Ser Val Pro
 290 295 300
 Cys Pro Val Gly Ile Leu Val Pro Phe Pro Glu Ser Asp Ile Glu Ala
 305 310 315 320
 Arg Val Thr Ala Lys Pro Arg Thr His Pro His Tyr Arg Leu Lys Glu
 325 330 335
 Val Val Glu Phe Glu Arg Pro Val Glu Lys Ala Thr Asp Val Leu Arg
 340 345 350
 Arg Lys Asp Val Asp Val Gly Lys Thr Arg Gly Val Asp Glu Val Gly
 355 360 365
 Leu Pro Leu Ala His Leu Gln Gln Pro Arg Leu Val Pro Gly Asp Phe
 370 375 380
 Leu Leu Lys Ser Pro Ala Val Arg Pro Cys Pro Ser Arg Phe Tyr Gln
 385 390 395 400
 Ala Asp Ala Gln Ala Val Gln Leu Arg Ser Arg Leu Gly Asp Thr Gln
 405 410 415
 Asp Ala Leu Arg Ile Asp Gln Thr Asp Val Thr Glu Val Pro Val Ile
 420 425 430
 Leu Thr Leu Gln His Val Gly His Val Gly Gly Asn Gly His Pro Gln
 435 440 445
 Lys Ile Val Ala Ala Ser Val Thr Tyr Gly Ile Pro Ala Gln Tyr Gly
 450 455 460
 His Gly Pro Val Asp Phe Ile Val Gly Val Phe Gly Phe Val Glu

6055

465	470	475	480											
Glu	Gln	Met	Asn	Asp	Arg	Phe	Ala	Arg	Gln	Lys	Gly	Gly	Val	Val
485	490	495												

<210> 10220

<211> 115

<212> PRT

<213> B.fragilis

<400> 10220

Ile	Tyr	Met	Asn	Asn	Met	Glu	Arg	Leu	Pro	Ala	Asp	Thr	Phe	Phe	Leu
1					5			10						15	
Asp	Leu	Glu	Leu	Arg	Gln	Glu	Val	Glu	Arg	Met	Ala	Ser	Leu	Gly	Tyr
					20			25						30	
Ala	Pro	Asp	Asp	Ile	Ala	Ser	Tyr	Leu	Gly	Leu	Asp	Ala	Glu	Ser	Phe
					35			40						45	
Val	Phe	Asp	Ala	Gly	Arg	Glu	Gly	Thr	Thr	Val	Tyr	Ser	Leu	Met	Arg
					50			55						60	
Arg	Gly	Ala	Leu	Lys	Ala	Gly	Ala	Gly	Val	Glu	Leu	Lys	Leu	Gln	Glu
					65			70						80	
Gln	Ala	Leu	Ser	Gly	Asp	Leu	Asp	Ala	Met	Glu	Leu	Leu	Glu	Lys	Val
					85			90						95	
Arg	Gly	Arg	Arg	Ser	Phe	Glu	Ile	Ile	Val	Lys	Gln	Ile	Asp	Glu	Asp
					100			105						110	
Glu	Phe	Gly													
		115													

<210> 10221

<211> 555

<212> PRT

<213> B.fragilis

<400> 10221

Pro	Thr	Asp	Asp	Val	Glu	Val	Arg	Tyr	Ser	His	Ile	Ile	Lys	Val	His
1					5			10						15	
His	Arg	Leu	Asp	Arg	His	His	Gln	Pro	Gly	Cys	Arg	Arg	Gly	Pro	Ala
					20			25						30	
Ala	Lys	Ser	Thr	Val	Ile	Gln	Ala	Arg	Arg	Ser	Ala	Asp	Cys	Val	Tyr
					35			40						45	
Asp	Met	Pro	Gly	Ala	Pro	Leu	Ala	Phe	Val	Gly	Asn	Thr	Tyr	Thr	Asn
					50			55						60	
Leu	Arg	Asp	Asn	Ile	Met	Pro	Ala	Val	Lys	Thr	Gly	Trp	Glu	Leu	Met
					65			70						80	
Gly	Leu	Tyr	Glu	Gly	Val	His	Tyr	Val	Ser	Ser	Cys	Arg	Pro	Pro	Glu
					85			90						95	
Ser	Trp	Arg	Arg	Cys	Ser	Val	Ile	Val	Asp	Asp	Tyr	Lys	Asn	Thr	
					100			105						110	
Val	Ser	Phe	Phe	Asn	Gly	Cys	Ile	Ile	Phe	Gly	Ser	Leu	Asp	His	
					115			120						125	
Pro	Ser	Leu	Leu	Ala	Gly	Lys	Ser	Val	Val	His	Leu	Phe	Phe	Glu	
					130			135						140	
Ser	Lys	Tyr	Ala	Pro	Asp	Asn	Lys	Val	Asn	Arg	Ala	Met	Pro	Val	Leu
					145			150						160	
Arg	Gly	Asp	Ala	Ile	Arg	Tyr	Gly	Cys	Ser	His	Tyr	Phe	Leu	Gly	Val
					165			170						175	
Thr	Ile	Thr	Thr	Asp	Met	Pro	Asp	Val	Leu	Glu	Gly	Glu	Tyr	Asp	Trp
					180			185						190	
Tyr	Phe	Arg	Tyr	Val	Cys	Leu	Val	Asp	Pro	Gln	Arg	Ile	Leu	Arg	Ile
					195			200						205	

Ala Gln Ala Ala Ala Glu Leu Asn Ser Leu Arg Val Arg Leu Val Lys
 210 215 220
 Ala Gly Arg Thr Arg Thr Asp Cys Gly Ala Leu Lys Lys Lys Ile Ala
 225 230 235 240
 Trp Tyr Glu Ala Gly Leu Leu Lys Met Arg Lys Gly Gln Thr Tyr Phe
 245 250 255
 Ile Asn Ala Ser Ser Phe Thr Asn Ile Asp Ile Leu Thr Pro Glu Tyr
 260 265 270
 Val Arg Arg Leu Leu Asp Gly Ala Leu Glu Leu His Asp Phe Leu Lys
 275 280 285
 Ser Val Val Gly Met Arg Pro Gly Leu Arg Arg Asp Thr Arg Phe Tyr
 290 295 300
 Ile Ala Phe Gly Glu Arg His Lys Tyr Thr Asp Gly Thr Arg Tyr Gly
 305 310 315 320
 Glu Pro Ala Gln Ser Cys Leu Asp Leu Arg Phe Leu Arg Arg Gly Glu
 325 330 335
 Pro Ile Asp Gly Gly Val Asp Phe Gly Asn Gln Leu Ser Leu Ile Val
 340 345 350
 Gly Gln Gln Asp Gly Pro Leu Tyr Arg Leu His Lys Asn Phe Tyr Glu
 355 360 365
 Leu Pro Pro Gly Trp Phe Arg Gln Leu Ala Asp Gln Phe Leu Ala Phe
 370 375 380
 Phe Leu Asn His Glu Glu Lys Glu Leu Asn Leu Tyr Tyr Asp Arg Ala
 385 390 395 400
 Gly Asn Asn Phe Glu Lys Gln Lys Glu Asp Tyr Ala Arg Lys Leu Lys
 405 410 415
 Gln Ala Ile Glu Ile Asp Gly Asp Gly Asn Arg Thr Gly Trp Ile Val
 420 425 430
 Asn Leu Met Ser Arg Lys Gln Ser Asn Ile Arg Gln Asp Glu Glu Tyr
 435 440 445
 Asp Phe Met Gln Glu Leu Met Thr Gly Asp Asn Asp Ala Leu Pro Thr
 450 455 460
 Leu Leu Val Asp Ala Val Asn Cys Arg Glu Thr Ile Ser Ser Ile Glu
 465 470 475 480
 Lys Ala Pro Ala Gly Ile Arg Tyr Lys Gly Gln Gln Lys Ile Ile Tyr
 485 490 495
 Lys Val Lys Lys Ser Glu Lys Leu Glu Pro Lys Lys Leu Pro Met Leu
 500 505 510
 Ser Thr Asn Phe Ser Asp Ala Phe Lys Tyr Leu Met Met Arg Gly Ala
 515 520 525
 Trp Arg Arg Ala Val Arg Gly Lys Ser Gly Arg Ser Arg Ser Gly Pro
 530 535 540
 Tyr Met Pro Gly Leu Asp Asp Leu Thr Gly Gly
 545 550 555

<210> 10222

<211> 358

<212> PRT

<213> B.fragilis

<400> 10222

Trp Ser Asp Ile Lys Thr Ile Pro Leu Ser Gly Asn Cys Leu Val Phe
 1 5 10 15
 Pro Leu Arg Gly Lys Ala Ile Ala Phe Phe Gln Ser Phe Val Pro Gln
 20 25 30
 Pro Val Ser Gly Ile Phe Thr Ala Tyr His Leu Lys Phe Asn Ser Met
 35 40 45
 Lys Glu Gln Ile Ile Ser Tyr Leu Glu Gly Pro Arg Asp Tyr Ser Gln
 50 55 60

Gly Val Ala Leu Tyr Glu Gln Phe Gly Pro Asn Arg Met Leu Lys Ala
 65 70 75 80
 Lys Phe Arg Gln Ile Gly Glu Cys Glu Met Thr Arg Gly Thr Leu Ile
 85 90 95
 Glu Glu Leu Arg Lys Leu Ser Gly Met Ser Glu Ala Glu Phe Ala Gly
 100 105 110
 Met His Arg Lys Ala His His Ile Pro Ser Lys Ala Glu Gln Pro Val
 115 120 125
 Ser Pro Val Pro Val Arg Met Tyr Ala Asp Asp Leu Leu Ile Ala Leu
 130 135 140
 Ala Ser Arg Leu Gly Val Thr Val Glu Lys Leu Val Ser Asp Asp Phe
 145 150 155 160
 Val Lys Glu Arg Leu Ser Gln Ser Pro Asp Met Glu Gln Val Arg Gly
 165 170 175
 Leu Lys Glu Glu Leu Glu Asn Ala Gln Ser Thr Tyr Ser Glu Ala Pro
 180 185 190
 Glu Thr Val Arg Lys Ala Ile Arg Phe Arg Glu Glu Phe Pro Phe Leu
 195 200 205
 Arg Gln Pro Asp Cys Pro Asp Glu Leu Lys Val Leu Val Ala Asp Met
 210 215 220
 Phe Ser Ala Tyr Asp Leu Tyr Arg Glu Ser His Arg Met Leu Val Glu
 225 230 235 240
 Thr Pro Asp Asp Val Ala Thr Gly Glu Thr Tyr Leu Trp Ala Lys Thr
 245 250 255
 Ala Val Glu Asn Phe Leu Glu Asn Arg Gln Met Trp Glu Glu Leu Glu
 260 265 270
 Tyr Tyr Lys Asn Asn Gly Glu Ile Leu Gly Lys Ala Gln Ala Met Arg
 275 280 285
 Gln Ala Arg Glu Lys Gln Glu Ile Ser Ser Leu Thr Asp Leu Glu Leu
 290 295 300
 Ser Lys Gln Leu Gly Asn Ala Lys Ser Asn Ile Ser Lys Gly Lys Asn
 305 310 315 320
 Glu Leu Glu Lys Ala Pro Asp Glu Glu Lys Arg Val Lys Ala Met Glu
 325 330 335
 Lys Thr Arg Lys Trp Thr Glu Arg Lys Asn Leu Leu Glu Ala Glu Met
 340 345 350
 Glu Ser Arg Lys Lys Asn
 355

<210> 10223

<211> 209

<212> PRT

<213> B.fragilis

<400> 10223

Ser Lys Ser Met Lys Thr Asn Leu Val Lys Pro Ser Arg Val Asn Phe
 1 5 10 15
 Glu Lys Ala Asp Ile Gly Gln Ile Gly Arg Ile Leu Ala Thr Gly Asp
 20 25 30
 Leu Asp Ser Leu Pro Glu Glu Gln Arg Ala Tyr Tyr Asp Leu Met Glu
 35 40 45
 Met Val Arg Gly Leu Arg Ala Arg Met Arg Tyr Asn Gly Lys Val Ile
 50 55 60
 Thr Lys Ala Gly Ile Ile Arg Leu Leu Lys Ser Glu Val Tyr Gly Leu
 65 70 75 80
 Ser Asp Trp Met Ala Arg Gln Val Tyr Ala Asp Ser Val Asn Phe Phe
 85 90 95
 Tyr Ser Gln Glu Asn Ile Arg Pro Gln Ala Phe Ala Asn Leu Tyr Ala
 100 105 110

Glu Lys Leu Glu Lys Trp Ala Asp Ser Met Phe Leu Thr Gly Lys Gly
 115 120 125
 Glu Glu Ala Ser Arg Ile Leu Glu Arg Ala Ala Arg Leu Arg Val Arg
 130 135 140
 Phe Ala Cys Asp Glu Gln Glu Ile Pro Gln Glu Leu Leu Asp Arg Lys
 145 150 155 160
 Pro Val Val Ile Tyr Thr Cys Asp Gly Ser Asp Met Gly Val Pro Asp
 165 170 175
 Thr Asp Arg Lys Glu Leu Glu Ala Phe Ile Asp Ser Ile Pro Glu Val
 180 185 190
 Pro Ser Val Val Arg Glu Arg Val Lys Glu Asp Ala Arg Ile Lys Lys
 195 200 205
 Phe

<210> 10224
 <211> 337
 <212> PRT
 <213> B.fragilis

<400> 10224
 Phe Cys Gly Ala Glu Ile Asn Ile Ser Lys Met Asn Ala Lys Lys Asn
 1 5 10 15
 Leu Met Ala Phe Ile Leu Thr Val Ser Ser Ile Ala Leu Met Val Ile
 20 25 30
 Cys Leu Gly Leu Glu Met Val Lys Ala Cys Ala Gly Gly Asp Gly Ser
 35 40 45
 Glu Trp Lys Lys Lys Val Ala Ala Asp Thr Leu His Val Val His Tyr
 50 55 60
 Thr Arg Pro Asp Leu Pro Gln Ile Met Thr Asp Pro Ala Glu Arg Ala
 65 70 75 80
 Val Tyr Tyr Val Lys His Tyr Trp Asp Gly Tyr Leu Thr Gly Asp Thr
 85 90 95
 Ala Trp Val Asn Ser Gly Asp Thr Glu Gln Leu Tyr Val Asp Phe Ile
 100 105 110
 Asp Ala Leu Lys Tyr Val Glu Pro Glu Thr Gly Arg Lys Ala Leu His
 115 120 125
 Thr Met Met Val Arg Met Glu Ala Asp Ser Thr Ala Tyr Arg Arg Phe
 130 135 140
 Gly Leu Leu Gly Glu Lys Tyr Leu Asn Glu Pro Asn Ser Pro Met Arg
 145 150 155 160
 Asn Glu Asp Phe Tyr Ile Ala Val Leu Glu Gln Met Leu Gln Ser Asp
 165 170 175
 Arg Leu Gln Glu Trp Glu Lys Ile Arg Pro Ala Asp Arg Leu Lys Gln
 180 185 190
 Ala His Lys Asn Arg Pro Gly Met Lys Ala Ala Asp Phe Thr Tyr Val
 195 200 205
 Thr Val His Gly Asp Asn Ser Arg Met Ser Arg Leu Lys Ala Gln Tyr
 210 215 220
 Thr Met Leu Phe Phe Tyr Asp Pro Asp Cys Ser Asn Cys Arg Lys Phe
 225 230 235 240
 Glu Lys Leu Phe Ala Glu Ile Pro Ala Phe Val Glu Met Val Glu Asn
 245 250 255
 Gly Thr Leu Arg Val Leu Ala Ile Tyr Pro Asp Glu Asn Arg Glu Glu
 260 265 270
 Trp Ala Ala Lys Ala Val Tyr Met Pro Gln Gly Trp Ile Val Gly Trp
 275 280 285
 Asn Lys Ala Gly Asp Ile Arg Thr Arg Gln Leu Tyr Asp Ile Arg Ala
 290 295 300

Thr Pro Thr Ile Tyr Leu Leu Asp Gly Arg Lys Arg Val Ile Leu Lys
 305 310 315 320
 Asp Thr Ser Met Glu Gln Leu Ile Asp Tyr Leu Ala Thr Gln Ala Gly
 325 330 335
 Lys

<210> 10225
 <211> 126
 <212> PRT
 <213> B.fragilis

<400> 10225
 Thr Leu Lys Asp Met Val Glu Ile Arg Lys Ile Glu Glu Val Trp Gly
 1 5 10 15
 Gly Val Asp Ile Pro Glu Ile Thr Gly Val Tyr Asp Pro Leu Ser Gly
 20 25 30
 Leu Arg Asp Gly Thr Ile Thr Ser Gln Ala Pro Ile Val Val Ser Gly
 35 40 45
 Tyr Asn Leu Asn Arg Tyr Ala Leu Glu Asn Ile Arg Leu Cys Leu Val
 50 55 60
 Thr His Ala Lys Pro Glu Gln Val Ile Asp Ile Arg Leu Val Tyr Thr
 65 70 75 80
 Tyr Ser Glu Gly Lys Val Val Val Ala Leu Pro Glu Leu Lys Pro Gly
 85 90 95
 Glu Tyr Arg Pro Ala Val Ile Leu Lys Gly Asp Glu Lys Lys Val Tyr
 100 105 110
 Val Leu Pro Met Arg Trp Val Val Arg Gly Arg Trp Arg Arg
 115 120 125

<210> 10226
 <211> 71
 <212> PRT
 <213> B.fragilis

<400> 10226
 Thr Gly Leu Leu Leu His Arg Gln Leu Tyr Pro Phe Pro Phe Glu
 1 5 10 15
 Val Tyr Ala Gln Tyr Phe His Arg Asp Val Leu Val Asn Gly Asp His
 20 25 30
 Phe Gly Gly Ile Gly Asp Glu Ser Val Gly Lys Leu Gly Glu Met Asp
 35 40 45
 Lys Pro Val Leu Leu Asp Ala Tyr Ile Asp Lys Ser Ser Glu Val Gly
 50 55 60
 Asp Val Ala Asp Asn Thr Gly
 65 70

<210> 10227
 <211> 708
 <212> PRT
 <213> B.fragilis

<400> 10227
 Phe Met Glu Ile Phe His Lys Met Ile Ser Ala Ala Leu Asn Leu Pro
 1 5 10 15
 Glu Lys Gln Ile Ser Asn Thr Leu Gly Leu Leu Ala Glu Gly Ala Thr
 20 25 30
 Ile Pro Phe Ile Ser Arg Tyr Arg Lys Glu Ile Thr Gly Gly Leu Asp
 35 40 45

Glu Val Gln Ile Glu Ser Ile Lys Thr Gln Tyr Asp Lys Leu Ser Glu
 50 55 60
 Leu Ala Lys Arg Lys Glu Thr Ile Leu Gly Thr Ile Gly Glu Gln Gly
 65 70 75 80
 Lys Leu Thr Pro Glu Leu Arg Gln Arg Ile Asp Ala Thr Trp Asp Ala
 85 90 95
 Thr Ala Leu Glu Asp Ile Tyr Leu Pro Tyr Lys Pro Lys Arg Lys Thr
 100 105 110
 Arg Ala Glu Ala Ala Arg Gln Lys Gly Leu Glu Pro Leu Ala Leu Leu
 115 120 125
 Leu Met Met Gln Arg Glu Asn Asn Leu Gly Ser Arg Ile Pro Ala Phe
 130 135 140
 Val Lys Gly Asp Val Lys Asp Ala Glu Asp Ala Leu Lys Gly Ala Arg
 145 150 155 160
 Asp Ile Ile Ala Glu Gln Val Ser Glu Asp Glu Arg Ala Arg Asn Ala
 165 170 175
 Val Arg Asn Leu Phe Ala Arg Gln Ala Val Ile Ser Ala Lys Val Val
 180 185 190
 Lys Gly Lys Asp Glu Glu Ala Ala Lys Tyr Arg Asp Tyr Phe Asp Phe
 195 200 205
 Ser Ser Pro Leu Lys Arg Cys Thr Ser His Arg Leu Leu Ala Ile Arg
 210 215 220
 Arg Ala Glu Ala Glu Gly Leu Leu Lys Val Ser Ile Thr Pro Asp Asp
 225 230 235 240
 Asp Glu Cys Leu Glu Arg Leu Asp Arg Gln Phe Val Arg Ser Asn Asn
 245 250 255
 Glu Cys Gly Arg Gln Val Ala Glu Ala Val Gln Asp Ala Tyr Arg Arg
 260 265 270
 Leu Leu Lys Pro Ser Ile Glu Thr Glu Phe Ala Ser Leu Ser Lys Glu
 275 280 285
 Gln Ala Asp Asp Glu Ala Ile Arg Val Phe Ala Glu Asn Leu Arg Gln
 290 295 300
 Leu Leu Leu Ala Pro Pro Leu Gly Gln Lys Arg Val Met Gly Ile Asp
 305 310 315 320
 Pro Gly Phe Arg Thr Gly Cys Lys Val Val Cys Leu Asp Ala Gln Gly
 325 330 335
 Asn Leu Val His Asn Glu Asn Ile Tyr Pro His Pro Pro Val Asp Lys
 340 345 350
 Lys Thr Glu Ala Ala Ser Lys Leu Arg Lys Met Ile Glu Ala Tyr Lys
 355 360 365
 Ile Glu Ala Ile Ala Ile Gly Asn Gly Thr Ala Ser Arg Glu Thr Glu
 370 375 380
 Asn Phe Val Thr His Gln Gln Phe Asp Arg Pro Val Gln Val Phe Val
 385 390 395 400
 Val Ser Glu Gln Gly Ala Ser Ile Tyr Ser Ala Ser Lys Thr Ala Arg
 405 410 415
 Asp Glu Phe Pro Asp Tyr Asp Val Thr Val Arg Gly Ala Val Ser Ile
 420 425 430
 Ala Arg Arg Leu Met Asp Pro Leu Ala Glu Leu Val Lys Ile Asp Pro
 435 440 445
 Lys Ser Ile Gly Val Gly Gln Tyr Gln His Asp Val Asp Gln Thr Lys
 450 455 460
 Leu Lys Lys Ser Leu Asp Gln Thr Val Glu Asn Cys Val Asn Gln Val
 465 470 475 480
 Gly Val Asn Leu Asn Thr Ala Ser Ser His Leu Leu Thr Tyr Ile Ser
 485 490 495
 Gly Leu Gly Pro Gln Leu Ala Gln Asn Ile Val Ala Tyr Arg Ala Ala
 500 505 510
 Asn Gly Ala Phe Ala Ser Arg Lys Glu Leu Met Lys Val Pro Arg Met

515	520	525
Gly Ala Lys Ala Phe Glu Gln Cys Ala Gly Phe Leu Arg Ile Ala Gly		
530	535	540
Gly Glu Asn Pro Leu Asp Asn Thr Ala Val His Pro Glu Ser Tyr Gly		
545	550	555
Ile Val Gln Gln Met Ala Lys Asp Leu Ser Cys Thr Val Pro Gln Leu		
565	570	575
Ile Ala Asp Lys Ser Leu Arg Thr Arg Ile Glu Met Glu Lys Tyr Ile		
580	585	590
Thr Pro Thr Val Gly Leu Pro Thr Leu Lys Asp Ile Leu Gln Glu Leu		
595	600	605
Asp Lys Pro Gly Arg Asp Pro Arg Asp Thr Ile Gln Val Phe Glu Phe		
610	615	620
Asp Arg Asn Val Arg Thr Ile Asn Asp Leu Arg Glu Gly Met Thr Leu		
625	630	635
Pro Gly Ile Val Ser Asn Ile Thr Asn Phe Gly Ala Phe Val Asp Ile		
645	650	655
Gly Ile Lys Glu Asn Gly Leu Val His Leu Ser Gln Leu Ala Asn Arg		
660	665	670
Phe Ile Thr Asp Pro Thr Glu Val Val Ser Ile His Gln His Val Thr		
675	680	685
Val Lys Val Leu Ser Ile Asp Leu Glu Arg Lys Arg Ile Gln Leu Thr		
690	695	700
Met Lys Glu Glu		
705		

<210> 10228

<211> 108

<212> PRT

<213> B.fragilis

<400> 10228

Ala Thr Asn Val Arg Asn Lys Ser Ala Ile Thr Ile Asn Phe Tyr Tyr		
1	5	10
Leu Cys Gly His Lys Lys Thr Asp Thr His Thr Leu Lys Gln Met Asn		
20	25	30
Met Pro Val Ser Phe Lys Tyr Ile Leu Tyr Leu Leu Leu Val Ile		
35	40	45
Gly Cys Cys Pro Pro Met Ala Gly His Ala Ala Thr Gly Glu Lys Pro		
50	55	60
Ile Leu Met Ile Cys Ser Tyr Asn Pro Gly Ala Tyr Pro Thr Ser Ala		
65	70	75
Asn Val Ser Asp Phe Met Asp Glu Tyr Gln Arg Leu Gly Gly Lys Arg		
85	90	95
Gly Val Val Ile Glu Asp Ser His His Arg Gly Cys		
100	105	

<210> 10229

<211> 277

<212> PRT

<213> B.fragilis

<400> 10229

Arg His Ile Val Cys Val Asp Ser Asn Gln Ser Trp Arg Ile Val Ser		
1	5	10
Asp Lys Ala Ala Asp Trp Val Glu Val Ser Glu Pro Glu Leu Leu Gln		
20	25	30
Gly His Tyr Asp Gly Arg Phe Thr Val Lys Val His Ser Asn Ala Gly		
35	40	45

Tyr Arg Val Arg Gly Gly Phe Pro Ala Ala Arg His Thr Val Leu Ser
 50 55 60
 Leu Val Asn Asp Thr Gly Val Val Arg Asp Ile Leu Ile Tyr Gln Gly
 65 70 75 80
 Gly Tyr Val Arg Ile Arg Gly Lys Tyr Trp Leu Asp Arg Asn Leu Ala
 85 90 95
 Ala Gly Gly Lys Leu Ala Gln Val Ala Ile Pro Leu Gly Leu Glu Val
 100 105 110
 Asp Thr Thr Leu Asn Arg Gly Thr Tyr Phe Gln Phe Gly Cys Pro Thr
 115 120 125
 Asp Arg Trp Glu Glu Asn Phe Met Pro Cys Arg Gly Ser Trp Tyr Asp
 130 135 140
 Gly Thr Ala Glu Ser Pro Ala Arg Ile Asn Glu Leu Asp Pro Ser Pro
 145 150 155 160
 Glu Gly Trp Arg Leu Pro Ser Arg Ile Glu Met Glu Ala Leu Met Asn
 165 170 175
 Ser Pro Ala Ala Pro Met Glu Leu Gln Arg Glu Glu Asp Arg Thr Asn
 180 185 190
 Ile Cys Leu Leu Ser Asp Asp Gly Val Pro Val Tyr Leu Pro Leu Cys
 195 200 205
 Gly His Arg Ser His Ile Asn Gly Cys Arg Ile Val Ile Pro His Gly
 210 215 220
 His Arg Tyr Trp Thr Gly Ser Ser Gln Ser Pro Val Tyr Gly Tyr Ser
 225 230 235 240
 Leu Cys Val Glu Pro Ser Arg Gln Met Tyr Leu Met His Asp Met Lys
 245 250 255
 Lys Tyr Gly Phe Pro Val Arg Ser Ile Phe Asn Asp Glu Arg Gln Met
 260 265 270
 Val Asn Asp Lys Leu
 275

<210> 10230

<211> 304

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (304)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10230

Gly Lys Met Thr His Arg Ile Gln Gln Glu Ser Ile Lys Arg Arg Leu
 1 5 10 15
 Ala Lys Leu Ala Ala Pro Ile Phe Ile Glu Thr Leu Leu Ile Met Met
 20 25 30
 Leu Gly Ala Val Asp Thr Ile Met Leu Ser Arg His Ser Asp Asn Ser
 35 40 45
 Val Ala Ala Val Gly Val Val Asn Gln Ile Ile Met Leu Thr Phe Leu
 50 55 60
 Val Phe Glu Val Ile Asn Leu Gly Thr Ser Val Leu Cys Ser Gln Tyr
 65 70 75 80
 Leu Gly Ala Arg Leu Glu Lys Lys Val Val Gln Val Val Gly Val Ser
 85 90 95
 Leu Leu Val Asn Leu Leu Val Gly Gly Ile Ile Ser Leu Ile Leu Phe
 100 105 110
 Thr Met Ala Arg Thr Ile Leu Gln Trp Met Gly Leu Gly Pro Glu Leu
 115 120 125
 Met Ala Asp Gly Met Asp Tyr Met Arg Ile Val Gly Ala Phe Ala Phe

130	135	140
Phe Gln Ala Ile Ser Leu Thr Leu Ser Ala Ser Leu Arg Ser Ala Asn		
145	150	155
Lys Ala Ile Tyr Pro Met Leu Val Thr Val Val Val Asn Ile Leu Asn		160
165	170	175
Ile Ile Gly Asn Tyr Ser Leu Ile Phe Gly Lys Phe Gly Cys Pro Glu		
180	185	190
Leu Gly Val Glu Gly Ala Ala Ile Ser Thr Ala Phe Ser Arg Gly Val		
195	200	205
Ser Met Val Ile Leu Phe Val Ile Leu Phe Arg Lys His Ile His Arg		
210	215	220
Phe Pro Leu Ala Tyr Phe Arg Pro Phe Pro Phe Ile Glu Leu Lys Asn		
225	230	235
Leu Met Arg Val Gly Leu Pro Ser Ala Gly Glu Gln Leu Ser Tyr Ser		240
245	250	255
Ser Ser Gln Val Val Ile Thr Phe Phe Ile Asn Met Leu Gly Val Glu		
260	265	270
Ala Leu Ala Thr Arg Thr Tyr Cys Val Asn Ile Ile Met Phe Gly Tyr		
275	280	285
Ile Phe Ser Ile Ser Met Ala Gln Gly Gly Ala Ile Trp Ile Gly Xaa		
290	295	300

<210> 10231

<211> 257

<212> PRT

<213> B.fragilis

<400> 10231

Lys Gln Lys Thr Met Asn Lys Glu Val Asp Leu Ser Val Ser Cys Leu		
1	5	10
Gly Lys Val Lys Glu Leu Lys Tyr Asp Val Ile Ile Leu Pro Trp Gly		
20	25	30
Ala Thr Glu Pro His Asn Leu His Leu Pro Tyr Leu Thr Asp Cys Ile		
35	40	45
Leu Pro His Asp Ile Ala Val Glu Ala Ala Glu Leu Ala Leu Ser Arg		
50	55	60
Ser Gly Val Arg Cys Met Val Met Pro Pro Val Pro Phe Gly Ala His		
65	70	75
Asn Pro Gly Gln Arg Glu Leu Pro Phe Cys Ile His Thr Arg Tyr Ala		
85	90	95
Thr Gln Gln Ala Ile Leu Glu Asp Ile Val Ser Ser Leu His Val Gln		
100	105	110
Gly Phe Arg Lys Leu Leu Ile Leu Ser Gly His Gly Gly Asn Asn Phe		
115	120	125
Lys Gly Met Ile Arg Asp Leu Ala Phe Glu Tyr Pro Asp Phe Leu Ile		
130	135	140
Ala Ala Ala Asn Trp Phe Glu Val Val Ser Pro Lys Gly Tyr Phe Glu		
145	150	155
Ala Glu Ile Asp Asp His Ala Gly Glu Ser Glu Thr Ser Val Met Met		
165	170	175
His Tyr His Pro Glu Leu Val Asn Leu Ala Glu Ala Gly Asp Gly Glu		
180	185	190
Ser Lys Pro Phe Ala Ile Ala Ser Leu Asn Glu Lys Val Ala Trp Val		
195	200	205
Pro Arg His Trp Asp Lys Ala Thr Val Asp Ser Gly Val Gly Asn Pro		
210	215	220
Lys Lys Ala Thr Ala Glu Lys Gly Glu Arg Tyr Val Lys Pro Ile Val		
225	230	235
Glu Lys Leu Ala Gly Leu Phe Glu Glu Met Ala Gln His Asp Leu Tyr		240

245

250

255

Glu

<210> 10232

<211> 118

<212> PRT

<213> B.fragilis

<400> 10232

Asn	Asn	Met	Ala	Glu	Glu	Leu	Thr	Phe	Ile	Ser	Gly	Ser	Lys	Glu	Glu
1				5					10				15		
His	Tyr	Leu	Ser	Leu	Leu	Pro	Gln	Val	Arg	Ser	Leu	Ile	Glu	Gly	Glu
				20					25				30		
Val	Asp	Leu	Val	Ala	Asn	Leu	Ala	Asn	Val	Ala	Ala	Ala	Leu	Lys	Glu
				35					40				45		
Ala	Phe	Asp	Phe	Phe	Trp	Val	Gly	Phe	Tyr	Leu	Val	Lys	His	Asp	Gln
					50				55				60		
Leu	Val	Leu	Gly	Pro	Phe	Gln	Gly	Ser	Gly	Ala	Cys	Thr	Arg	Ile	Pro
				65				70			75		80		
Lys	Gly	Lys	Gly	Val	Trp	Gly	Thr	Ala	Trp	His	Glu	Gly	Ala	Thr	Leu
				85				90			95				
Leu	Val	Pro	Asp	Val	Glu	Ile	Phe	Pro	Gly	Gln	Ile	Ala	Leu	Glu	Ile
				100				105					110		
Cys	Phe	Pro	Asp	Arg	Lys										
				115											

<210> 10233

<211> 66

<212> PRT

<213> B.fragilis

<400> 10233

Glu	Phe	Lys	Asn	Ile	Phe	Leu	Leu	Lys	Gly	Ala	Cys	Arg	Lys	Lys	Ser
1					5			10				15			
Pro	Phe	Ile	Leu	Leu	Arg	Met	Thr	Thr	Thr	Gly	Met	Asp	Gly	Lys	Ala
					20			25				30			
Thr	Val	Ile	Leu	His	Asn	Tyr	Glu	Asp	Lys	Lys	Tyr	Pro	Ala	Val	Leu
				35				40				45			
His	Gly	Asn	Arg	Leu	Trp	Leu	Arg	Pro	Tyr	Glu	Ala	Ile	Ala	Trp	Lys
				50				55				60			
Leu	Thr														
	65														

<210> 10234

<211> 152

<212> PRT

<213> B.fragilis

<400> 10234

Lys	Leu	Tyr	Asp	Met	Lys	Thr	Leu	Thr	Phe	Lys	Tyr	Leu	Lys	Leu	Phe
1					5				10				15		
Leu	Leu	Ala	Val	Ala	Met	Ile	Asn	Leu	Thr	Ser	Cys	Glu	Ile	Glu	Ile
					20			25				30			
Asp	Asp	Phe	Tyr	Asp	Asp	Asp	Asn	Ile	Gly	Gly	Ser	Tyr	Tyr	Asn	Lys
					35			40				45			
Ser	Leu	Asp	Leu	Cys	Ser	Arg	Pro	Trp	Ala	Asp	Thr	Phe	Tyr	Asp	Ala
				50				55				60			
Asp	Gly	Asn	Tyr	Cys	Tyr	Gln	Glu	Leu	Asn	Phe	Tyr	Leu	Asp	Arg	His

65	70	75	80
Gly	Glu	Asp	Tyr
Ile	Arg	Val	Glu
Tyr	Pro	Asn	Gly
Ile	Arg	Tyr	Ser
85	90	95	Glu
Ser	Val	Tyr	Ser
Phe	Thr	Trp	Asn
Trp	Glu	Asp	Arg
Arg	Ser	Gln	Tyr
Ser	Gln	Tyr	Ser
100	105	110	
Leu	Arg	Met	Val
Tyr	Gly	Pro	Gly
Asp	Val	Ser	Tyr
Leu	Asp	Asp	Val
115	120	125	
Trp	Ile	Arg	Gly
Gly	Asn	Val	Leu
Leu	Ser	Gly	Tyr
Tyr	Leu	Asp	Gly
Asp	Gly	His	Asp
130	135	140	Asn
Tyr	Val	Asp	Phe
Phe	Thr	Gly	Val
Arg			
145	150		

<210> 10235

<211> 160

<212> PRT

<213> B.fragilis

<400> 10235

Ile	Asp	His	Trp	Arg	Ser	Pro	Ser	Ser	Pro	Val	Val	Lys	Thr	Thr	Ala
1				5					10				15		
Met	Trp	Phe	Asn	Cys	Ala	Gly	Arg	His	Tyr	Arg	Arg	Trp	Arg	Cys	Pro
				20					25				30		
Ala	Gly	Asn	Arg	Val	Thr	Gly	Leu	Phe	Leu	Arg	Gln	Glu	Thr	Asp	Ser
				35				40				45			
Phe	Val	Leu	Gln	Thr	Asp	Ile	Gln	Arg	Leu	Gln	Gln	Val	Leu	Ile	Asn
				50				55				60			
Leu	Leu	Thr	Asn	Ala	Ala	Lys	Phe	Thr	Lys	Asn	Gly	Thr	Ile	Thr	Leu
				65				70				75			80
Gln	Phe	Glu	Val	Glu	Lys	Glu	Lys	Asn	Arg	Val	Leu	Phe	Ala	Val	Ala
				85				90				95			
Asp	Thr	Gly	Cys	Gly	Ile	Pro	Lys	Glu	Lys	Gln	Lys	Gln	Val	Phe	Glu
				100				105				110			
Arg	Phe	Glu	Lys	Leu	Asn	Glu	Tyr	Ala	Gln	Gly	Thr	Gly	Leu	Gly	Leu
				115				120				125			
Ser	Ile	Cys	Lys	Leu	Thr	Val	Asp	Lys	Trp	Gly	Gly	Asp	Ile	Trp	Ile
				130				135				140			
Asp	Pro	Asp	Tyr	Glu	Gly	Gly	Ala	Arg	Phe	Val	Val	Ser	His	Pro	Leu
				145				150				155			160

<210> 10236

<211> 463

<212> PRT

<213> B.fragilis

<400> 10236

Arg	Lys	Arg	Leu	Phe	Tyr	Cys	Ile	Leu	Val	Met	Asn	Asp	Lys	Tyr	Glu
1				5				10					15		
Glu	Arg	Leu	Gly	Thr	Asp	Arg	Met	Leu	Pro	Leu	Val	Phe	Arg	Met	Ala
				20				25					30		
Leu	Pro	Ala	Val	Ile	Ala	Gln	Ile	Val	Asn	Leu	Leu	Tyr	Asn	Ile	Val
				35				40				45			
Asp	Arg	Ile	Tyr	Ile	Gly	His	Ile	Pro	Gly	Ile	Gly	Thr	Gln	Ala	Leu
				50				55				60			
Ala	Gly	Ile	Gly	Val	Ala	Gly	Ser	Leu	Ile	Ile	Leu	Ile	Ser	Ala	Phe
				65				70				75			80
Ser	Ala	Ile	Val	Ala	Gly	Gly	Ala	Pro	Leu	Ala	Ala	Ile	Ala	Leu	
				85				90				95			
Gly	Gln	Gly	Asn	Arg	Thr	His	Ala	Glu	Lys	Ile	Leu	Gly	Asn	Gly	Phe
				100				105				110			

Val Leu Leu Leu Phe Phe Thr Leu Leu Thr Ser Gly Leu Ser Tyr Leu
 115 120 125
 Phe Met Glu Pro Ile Leu Leu Phe Thr Gly Ala Ser Glu Gln Thr Leu
 130 135 140
 Gly Tyr Ala Thr Ala Tyr Leu Ser Ile Tyr Leu Ile Gly Thr Leu Phe
 145 150 155 160
 Val Glu Val Ser Val Gly Leu Asn Thr Phe Ile Asn Thr Gln Gly Arg
 165 170 175
 Pro Gly Ile Ala Met Leu Ser Ile Val Ile Gly Ala Leu Leu Asn Ile
 180 185 190
 Leu Leu Asp Pro Leu Phe Ile Phe Val Phe Asp Trp Gly Val Lys Gly
 195 200 205
 Ala Ala Leu Ala Thr Ile Ile Ser Gln Ala Cys Ser Ala Gly Trp Val
 210 215 220
 Leu Phe Phe Leu Thr Ser Arg Arg Ala Ser Leu Arg Leu Glu Pro Arg
 225 230 235 240
 Tyr Met Arg Leu Asp Arg Lys Val Val Gly Ala Ile Leu Ala Leu Gly
 245 250 255
 Ala Ser Pro Phe Ile Met Ala Ser Thr Glu Ser Leu Val Gly Phe Val
 260 265 270
 Leu Asn Gly Ser Leu Lys Thr Phe Gly Asp Ile Tyr Val Ser Ala Leu
 275 280 285
 Thr Ile Met Gln Ser Ala Met Leu Phe Val Ser Val Pro Leu Ala Gly
 290 295 300
 Phe Ala Leu Gly Phe Val Pro Ile Val Ser Tyr Asn Tyr Gly His Gly
 305 310 315 320
 Asn Arg Glu Arg Val Lys Glu Cys Phe Lys Ile Val Met Thr Phe Met
 325 330 335
 Phe Leu Phe Asn Leu Val Leu Ile Leu Leu Met Ile Leu Phe Pro Ser
 340 345 350
 Val Ile Ala Ser Ala Phe Thr Ser Asp Glu Lys Leu Ile Glu Thr Val
 355 360 365
 Val Gln Val Met Pro Val Phe Leu Ala Gly Met Thr Ile Phe Gly Leu
 370 375 380
 Gln Arg Ala Cys Gln Asn Met Phe Val Ala Leu Gly Gln Ala Lys Val
 385 390 395 400
 Ser Ile Phe Ile Ala Leu Leu Arg Lys Val Ile Leu Leu Ile Pro Leu
 405 410 415
 Ala Leu Met Leu Pro Tyr Leu Met Gly Val Met Gly Val Tyr Ala Ala
 420 425 430
 Glu Ala Ile Ser Asp Ala Ala Ala Ile Cys Cys Thr Val Ile Phe
 435 440 445
 Ala Val Gln Phe Pro Arg Ile Met Asn Lys Leu Thr Val Arg Ser
 450 455 460

<210> 10237

<211> 583

<212> PRT

<213> B.fragilis

<400> 10237

Asn Met Ile Met Met Lys Arg Leu Ile Cys Met Tyr Ala Phe Leu Leu
 1 5 10 15
 Cys Leu Val Cys Val Leu Pro Ala Gln Glu Arg Glu Val Lys Leu Lys
 20 25 30
 Ile Val Gln Thr Ser Asp Val His Gly Asn Tyr Phe Pro Tyr Asn Phe
 35 40 45
 Ile Thr Gln Lys Glu Trp Gly Gly Ser Leu Ala Arg Val Tyr Ala Leu
 50 55 60

Val Gln Lys Asn Arg Glu Val Tyr Lys Gly Asn Leu Ile Leu Leu Asp
 65 70 75 80
 Asn Gly Asp Ile Leu Gln Gly Gln Pro Ser Ala Tyr Tyr Tyr Asn Tyr
 85 90 95
 Ile Asp Thr Val Ala Pro His Val Cys Ala Glu Met Met Asn Phe Met
 100 105 110
 Gly Tyr Asp Ala Gly Asn Met Gly Asn His Asp Val Glu Thr Gly Arg
 115 120 125
 Ala Val Phe Asp Arg Trp Ile Gly Glu Cys Asn Phe Pro Val Leu Gly
 130 135 140
 Ala Asn Ile Val Glu Thr Ala Thr Gly Glu Thr His Leu Pro Pro Tyr
 145 150 155 160
 Arg Val Leu Glu Arg Asp Gly Val Lys Ile Val Val Leu Gly Met Ile
 165 170 175
 Thr Pro Ala Ile Pro Ala Trp Leu Ser Glu Asn Leu Trp Gln Gly Leu
 180 185 190
 Arg Phe Asp Asp Met Glu Glu Thr Ala Arg Lys Trp Met Lys Val Ile
 195 200 205
 Arg Glu Lys Glu Asn Pro Asp Leu Val Ile Gly Leu Phe His Ala Gly
 210 215 220
 Gln Asp Ala Phe Val Met Ser Gly Arg Tyr Asn Glu Asn Ala Ser Leu
 225 230 235 240
 Asn Val Ala Lys Asn Val Pro Gly Phe Asp Met Val Leu Met Gly His
 245 250 255
 Asp His Ala Arg Glu Cys Lys Lys Val Val Asn Val Ala Gly Asp Ser
 260 265 270
 Val Leu Val Ile Asp Pro Ala Ser Asn Gly Ile Val Val Ser Asp Ile
 275 280 285
 Asp Val Thr Leu Lys Leu Lys Asp Gly Lys Val Val Ser Lys Gln Ile
 290 295 300
 Asp Gly Val Leu Thr Asp Thr Lys Glu Tyr Gly Val Ser Glu Ser Phe
 305 310 315 320
 Met Arg His Phe Ala Leu Gln Tyr Gly Ala Val Glu Lys Phe Val Ser
 325 330 335
 Lys Lys Ile Gly Val Phe Thr Glu Asp Leu Ser Thr Arg Pro Ala Tyr
 340 345 350
 Phe Gly Ser Ser Ala Phe Ile Asp Phe Ile His Ser Leu Gln Leu Asp
 355 360 365
 Ile Ser Gly Ala Asp Ile Ser Phe Ala Ala Pro Leu Ser Phe Asp Ala
 370 375 380
 Glu Ile Lys Lys Gly Asp Ile Arg Val Ser Asp Met Phe Asn Leu Tyr
 385 390 395 400
 Lys Tyr Glu Asn Met Leu Tyr Val Met Lys Leu Ser Gly Lys Glu Ile
 405 410 415
 Lys Asp Phe Leu Glu Glu Ser Tyr Tyr Met Trp Thr Asn Arg Met Lys
 420 425 430
 Ser Pro Glu Asp His Leu Leu Trp Leu Lys Glu Lys Arg Arg Ala Gly
 435 440 445
 Ala Glu Asp Arg Ala Ser Phe Gln Asn Phe Ser Phe Asn Phe Asp Ser
 450 455 460
 Ala Ala Gly Ile Ile Tyr Thr Val Asp Val Thr Arg Pro Lys Gly Glu
 465 470 475 480
 Lys Val Thr Ile Val Ser Met Ala Asp Gly Ser Pro Phe Arg Met Asp
 485 490 495
 His Ile Tyr Lys Val Ala Leu Asn Ser Tyr Arg Gly Asn Gly Gly
 500 505 510
 Glu Leu Leu Thr Lys Gly Ser Gly Ile Pro Gln Glu Lys Leu Lys Glu
 515 520 525
 Arg Ile Ile Phe Ser Thr Asp Lys Asp Leu Arg Phe Tyr Leu Met Gln

530	535	540	
Tyr Ile Glu Lys Lys Gly Thr Leu Asp Pro Arg Ala Leu Asn Gln Trp			
545	550	555	560
Lys Phe Val Pro Glu Glu Trp Val Lys Pro Ala Ala Gln Arg Asp Tyr			
565	570	575	
Glu Tyr Leu Phe Gly Gly Lys			
580			

<210> 10238

<211> 112

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (5)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10238

Val Gly His Ile Xaa Lys Ile Leu Leu Ser Phe Leu Leu Leu Thr Leu			
1	5	10	15
Phe Val Thr Tyr Gln Val Ser Ile Thr Met Phe Thr His Val His Tyr			
20	25	30	
Val Asn Gly Val Met Ile Ala His Ser His Pro Tyr Lys Gly Thr His			
35	40	45	
Ser His Thr Ala Ser Asn Ile Ile Val Ile Ala His Phe Ala Ala Phe			
50	55	60	
His Ser Leu Glu Val Asp Val His Tyr Asp Phe Thr Pro Glu Arg Pro			
65	70	75	80
Ile Leu Phe Thr Val Glu Ile Pro Glu Ser Ile Pro Val Thr Ala Gly			
85	90	95	
Thr His Leu Gln Val Ile Ser Leu Arg Ala Pro Pro Ala Glu Leu Ala			
100	105	110	

<210> 10239

<211> 766

<212> PRT

<213> B.fragilis

<400> 10239

Gln Lys Arg Met Lys His Tyr Ile Val Met Leu Val Leu Ala Cys Val			
1	5	10	15
Ser Met Ser Ser Tyr Ala Val Asn Pro Ile Lys Glu Gly Asn Met Ile			
20	25	30	
Ala Gly His Val Ile Val Lys Gly Thr Glu Glu Gly Ile Pro Phe Ala			
35	40	45	
Thr Val Met Ile Leu Gly Thr Asn Arg Gly Ala Val Ser Asn Glu Glu			
50	55	60	
Gly Gln Phe Glu Phe Arg Lys Leu Ala Ala Gly Lys Tyr Thr Leu Arg			
65	70	75	80
Val Gln Val Met Gly Tyr Lys Thr Gln Glu Lys Thr Ile Thr Val Ser			
85	90	95	
Ala Glu Ala Thr Ser Val Val His Phe Gln Met Glu Glu Val Ser Phe			
100	105	110	
Thr Thr Asp Glu Val Val Val Ser Ala Asn Arg Asn Glu Val Ser Arg			
115	120	125	
Lys Ala Ala Pro Val Val Val Asn Val Met Ser Ala Lys Leu Phe Glu			
130	135	140	
Thr Val Asn Ser Thr Asp Leu Ala Lys Ser Leu Asn Phe Gln Ser Gly			

145	150	155	160
Leu	Arg	Val	Glu
Asn	Asn	Cys	Gln
Asn	Cys	Gly	Phe
Pro	Gln	Val	Arg
165	170	175	
Ile	Asn	Gly	Leu
Glu	Gly	Pro	Tyr
Ser	Gln	Ile	Leu
Ile	Asn	Ser	Arg
180	185	190	
Pro	Ile	Ile	Ser
Ala	Leu	Ser	Gly
Gly	Val	Tyr	Gly
Leu	Glu	Gly	Gln
Ile	Pro		
195	200	205	
Val	Asn	Met	Ile
Glu	Arg	Val	Glu
Val	Gly	Val	Arg
Gly	Gly	Gly	Gly
Ser	Ala		
210	215	220	
Leu	Phe	Gly	Ala
Asn	Ala	Val	Gly
Gly	Thr	Ile	Asn
Ile	Ile	Thr	Lys
225	230	235	240
Asp	Pro	Ile	Asn
Asn	Ser	Phe	Gln
Gln	Val	Ala	Ser
Ala	Ser	Thr	Met
245	250	255	
Asn	Gly	Lys	Ser
Trp	Glu	Gln	Tyr
Met	Gly	Gly	Asn
Gly	Asn	Val	Ser
Leu	Val	Leu	Val
260	265	270	
Ala	Lys	Asp	Asn
Ser	Tyr	Gly	Ile
Ile	Ala	Leu	Tyr
Glu	Thr	Tyr	Arg
Asn	275	280	285
Arg	Asn	Pro	Tyr
Tyr	Asp	Ala	Asp
Gly	Asp	Gly	Phe
Ser	Glu	Leu	Gly
290	295	300	
Leu	Asn	Met	Asn
Thr	Phe	Gly	Met
Arg	Ala	Tyr	Arg
Pro	Asn	Tyr	Pro
Asn	295	310	320
Arg	Asn	Pro	Tyr
Tyr	Asp	Ala	Asp
Gly	Asp	Gly	Phe
Ser	Glu	Leu	Gly
295	300	305	
Gly	Gly	Asn	Lys
Asn	Leu	Gln	Pro
Phe	Glu	Asp	His
340	345	350	
Gln	Thr	Lys	His
Ile	Ile	Asn	Ser
Gly	Gly	Val	Ser
355	360	365	
Trp	Gly	Glu	Lys
His	His	His	Lys
370	375	380	
Asp	Arg	Asn	Ser
Tyr	Tyr	Gly	Ala
Gly	Ala	Lys	Asp
385	390	395	400
Lys	Thr	Asn	Asp
Asp	Leu	Thr	Trp
395	405	410	415
Met	Asp	Arg	Cys
Leu	Phe	Ala	Pro
420	425	430	
Tyr	Gln	Ser	Asn
Asn	Ser	Leu	His
435	440	445	
Met	Gln	Gln	Asp
Asp	Val	Arg	Ile
450	455	460	
Arg	Leu	Asn	Arg
Trp	Trp	Thr	Met
465	470	475	480
Asn	Leu	Ile	Asp
Leu	Asp	His	Pro
485	490	495	
Lys	Pro	Ser	Asp
Asn	Leu	Gln	Ala
500	505	510	
Arg	Ala	Pro	Gln
Ala	Tyr	Asp	Glu
515	520	525	
Gly	Glu	Gly	Val
Gly	Val	Gln	Ile
530	535	540	
Ser	Asn	Ser	Phe
Gly	Ser	Val	Asp
545	550	555	560
Trp	Gln	Ser	Asn
Ile	Ile	Leu	Leu
Glu	Gly	Phe	Tyr
565	570	575	
Val	Phe	Val	Leu
580	585	590	
Lys	Glu	Arg	Arg
Asn	Gly	Ser	Gly
Ala	Lys	Val	Tyr
595	600	605	
Asp	Ala	Lys	Val
Ala	His	Gly	Arg
610	615	620	

Thr Val Gln Arg Ser Arg Tyr Asn Arg Ala Glu Val Trp Thr Ser Glu
 625 630 635 640
 Gly Glu Glu Glu Gln Thr Thr Lys Arg Met Pro Arg Thr Pro Asp Tyr
 645 650 655
 Tyr Gly Tyr Phe Thr Phe Thr Ser Ala Pro Leu Lys Asn Phe Asp Phe
 660 665 670
 Ser Leu Ser Gly Thr Tyr Thr Gly Lys Met Ile Val Pro His Met Ala
 675 680 685
 Gly Tyr Ile Glu Lys Ser Arg Met Glu His Thr Pro Gln Phe Met Asp
 690 695 700
 Leu Asn Leu Lys Leu Asn Tyr Thr Phe Val Leu Lys Asp His Ile Lys
 705 710 715 720
 Met Gln Val Asn Gly Gly Val Gln Asn Ile Phe Asn Ser Phe Gln Lys
 725 730 735
 Asp Leu Asp Lys Gly Glu Phe Arg Asp Ala Gly Tyr Phe Tyr Gly Pro
 740 745 750
 Thr Gln Pro Arg Thr Tyr Phe Val Gly Ile Lys Ile Met Asn
 755 760 765

<210> 10240

<211> 224

<212> PRT

<213> B.fragilis

<400> 10240

Asn Glu Ser Phe Tyr Phe Glu Lys Leu Ile Tyr Ile Asn Arg Phe Ser
 1 5 10 15
 Tyr Phe Cys Pro Ala Ile Tyr Asn Asn Leu Ser Ile Tyr Asn Ile Met
 20 25 30
 Glu Asn Leu Lys Glu Thr Val Asp Ile Val Val Asn Ser Arg Tyr Pro
 35 40 45
 Glu Met Asn Arg Glu Gly Arg Glu Leu Leu Ala Gln Val Leu Ile Arg
 50 55 60
 Lys Glu Leu Glu Lys Gly Glu Met Leu Leu Asn Glu Gly Gln Ile Ser
 65 70 75 80
 Arg His Met Val Phe Val Gly Lys Gly Met Leu Arg Gln Phe Tyr Tyr
 85 90 95
 Lys Asn Gly Lys Asp Val Thr Glu His Phe Ser Tyr Glu Gly Cys Ile
 100 105 110
 Leu Met Cys Ile Glu Ser Leu Leu Lys Gln Glu Pro Thr His Leu Met
 115 120 125
 Ala Glu Ala Leu Glu Pro Ala Val Val Tyr Met Leu Pro Tyr Asp Val
 130 135 140
 Leu Gln Lys Leu Leu Glu Gln Ser Lys Glu Ile Asn Ala Phe Tyr Arg
 145 150 155 160
 Lys Val Leu Glu Tyr Ser Leu Ile Val Ser Gln Ile Lys Ala Asp Ser
 165 170 175
 Trp Arg Phe Glu Thr Ala Arg Glu Arg Tyr Asn Leu Leu Leu His His
 180 185 190
 His Pro Glu Ile Ile Lys Arg Ala Pro Leu Ser His Ile Ala Ser Tyr
 195 200 205
 Leu Leu Met Thr Pro Glu Thr Leu Ser Arg Val Arg Ser Gly Val Leu
 210 215 220

<210> 10241

<211> 653

<212> PRT

<213> B.fragilis

<400> 10241

Arg Arg Glu Pro Leu Asp Gln Val Thr Pro Glu Ser Tyr Phe Gln Asn
 1 5 10 15
 Ala Asp His Leu Ala Ala Tyr Ser Ile Ser Lys Tyr Gln Asn Leu Phe
 20 25 30
 Ser Thr His Ser Gly Phe Ser Ala Gly Thr Val Asn Asn Asp Gly Ala
 35 40 45
 Thr Asp Asn Met Val Ser Gly Gly Ser Ser Gly Ser Gly Leu Gln Asn
 50 55 60
 Tyr Tyr Thr Lys Asp Val Trp Lys Thr Glu Ala Ala Asn Asp Asn Trp
 65 70 75 80
 Asp Phe Ser Phe Phe Arg Tyr Cys Asn Tyr Phe Phe Glu Lys Val Leu
 85 90 95
 Pro Lys Tyr Glu Ala Gly Glu Ile Ser Gly Asn Ala Asp Asp Val Lys
 100 105 110
 His Tyr Ile Gly Glu Met Tyr Phe Ile Arg Ala Trp Lys Tyr Phe Gln
 115 120 125
 Lys Leu Arg Met Tyr Gly Asp Tyr Pro Ile Ile Thr Glu Val Leu Pro
 130 135 140
 Asp Asn Ala Glu Ile Leu Ile Glu Lys Gly Val Arg Gln Pro Arg Asn
 145 150 155 160
 Lys Val Ala Arg Phe Ile Leu Glu Asp Leu Asp Lys Ala Ala Glu Tyr
 165 170 175
 Met His Asp His Gly Phe Ala Gly Asn Asn Arg Leu Asn Lys Gln Cys
 180 185 190
 Ala Leu Leu Ile Lys Ser Arg Val Ala Leu Tyr Glu Ala Thr Phe Glu
 195 200 205
 Lys Tyr His Gln Gly Thr Gly Arg Val Pro Gly Asp Ala Asn Trp Pro
 210 215 220
 Gly Lys Arg Val His Pro Asp Tyr Lys Tyr Asp Ala Asn Thr Glu Ile
 225 230 235 240
 Asn Phe Phe Leu Asp Gln Ala Met Ser Ala Ala Glu Gln Val Ala Asp
 245 250 255
 Val Ile Lys Leu Thr Pro Asn Ser Gly Val Phe Asn Pro Ala Asn Asp
 260 265 270
 Asn Asp Ile Ser Gly Trp Asn Asp Tyr Phe Asp Met Phe Ser Ala Glu
 275 280 285
 Asp Met Ser Gly Phe Glu Glu Val Leu Phe Trp Arg Asp Tyr Tyr Ser
 290 295 300
 Gly Asp Phe Thr Ile Ala His Gly Ala Thr Ala Tyr Val Ala Ser Gly
 305 310 315 320
 Gly Asn Asn Gly Met Leu His Asn Tyr Val Gln Ser Phe Leu Met Lys
 325 330 335
 Asp Gly Met Pro Trp Tyr Ala Ala Thr Ala Ala Tyr Pro Phe Lys Gly
 340 345 350
 Asp Glu Arg Val Met Asp Glu Lys Ala Asn Arg Asp Glu Arg Leu Gln
 355 360 365
 Leu Phe Leu Phe Gly Glu Glu Asp Met Ile Pro Ala Val Ser Asn Ala
 370 375 380
 Ala Thr Asn Ala Met Lys Thr Tyr Gln Asp Ala Asn Tyr Pro Asn Ile
 385 390 395 400
 Ile Val Ala Glu Ser Gly Ile Lys Asp Leu Thr Gly Tyr Arg Ile Arg
 405 410 415
 Lys Cys Leu Ser Tyr Asp Gln Lys Gln Tyr Val Ser Gly Gln Ala Gln
 420 425 430
 Ser Thr Thr Gly Cys Val Ile Phe Arg Ala Val Glu Ala Tyr Leu Asn
 435 440 445
 Tyr Met Glu Ala Ala Cys Met Lys Asn Asn Gly Asn Val Thr Gly Lys
 450 455 460

Ala Ala Glu Tyr Trp Arg Ala Val Arg Ile Arg Ala Gly Val Asp Pro
 465 470 475 480
 Asp Phe Thr Lys Thr Ile Ala Ala Thr Asp Leu Ser Lys Glu Asn Asp
 485 490 495
 Leu Ala Lys Tyr Lys Gly Glu Asn Glu Met Ile Asp Val Thr Leu Phe
 500 505 510
 Asn Ile Arg Arg Glu Arg Arg Cys Glu Phe Ile Gly Glu Gly Met Arg
 515 520 525
 Met Asp Asp Leu Ile Arg Trp Arg Ser Leu Tyr Arg Leu Leu Val Glu
 530 535 540
 Arg Phe Ile Pro Glu Gly Phe Asn Phe Trp Gly Ser Asp Ala Tyr Lys
 545 550 555 560
 Arg Tyr Glu Gly Glu Asp Ala Lys Phe Glu Tyr Ile Glu Gly Pro Asp
 565 570 575
 Asn Ala Met Ala Asn Val Ser Ser Arg Lys Leu Ser Asn Tyr Leu Arg
 580 585 590
 Pro Tyr Ser Val Val Gln Lys Asn Asn Glu Ile Tyr Asp Gly Tyr Thr
 595 600 605
 Trp Ala Lys Ala His Tyr Leu Tyr Pro Val Pro Ile Arg Gln Ile Glu
 610 615 620
 Leu Leu Ser Pro Ser Gly Glu Ile Ala Ser Ser Val Ile Tyr Gln Asn
 625 630 635 640
 Pro Tyr Trp Pro Glu Glu Arg Asn Thr Ala Ala Ile Glu
 645 650

<210> 10242

<211> 840

<212> PRT

<213> B.fragilis

<400> 10242

Cys Met Lys Glu Lys Thr Asn Leu Phe Pro Ser Leu Ile Arg Leu Arg
 1 5 10 15
 Glu Thr Ser Arg Leu Lys Met Ala Ile Ala Ala Ser Ile Met Leu Trp
 20 25 30
 Cys Ala Thr Pro Gln Gln Ala Thr Ala Asp Thr Asn Glu Glu His Ala
 35 40 45
 Ile Glu Ala Val Gln Gln Ala Lys Val Lys Val Lys Gly Thr Val Val
 50 55 60
 Asp Glu Thr Gly Glu Pro Met Ile Gly Val Ala Val Lys Val Leu Ala
 65 70 75 80
 Asn Asn Thr Gly Thr Ile Thr Asp Leu Glu Gly Lys Phe Ser Val Glu
 85 90 95
 Ala Pro Leu Gly Ala Ile Gln Ile Ser Phe Ile Gly Tyr Lys Thr
 100 105 110
 Val Thr Val Lys Ala Ser Ser Glu Pro Ile Ser Val Thr Leu Lys Glu
 115 120 125
 Asp Ser Gln Gln Leu Asp Glu Val Val Val Gly Tyr Gly Ser Gln
 130 135 140
 Lys Lys Val Asn Val Thr Gly Ser Val Ser Met Val Asp Ser Lys Val
 145 150 155 160
 Ile Glu Ser Arg Pro Val Gln Asn Val Ser Gln Ala Leu Gln Gly Val
 165 170 175
 Val Pro Gly Leu Asn Met Ser Val Gly Asn Ser Gly Gly Ala Leu Asp
 180 185 190
 Ser Ser Leu Ser Ile Asn Ile Arg Gly Ala Gly Thr Ile Gly Glu Gly
 195 200 205
 Ser Ser Gly Ser Pro Leu Val Leu Ile Asp Gly Ile Glu Gly Asp Met
 210 215 220

Asn Thr Val Asn Pro Asn Asp Ile Glu Asn Ile Ser Val Leu Lys Asp
 225 230 235 240
 Ala Ala Ser Ser Ile Tyr Gly Ala Arg Ala Ser Phe Gly Val Ile
 245 250 255
 Met Ile Thr Thr Lys Ser Gly Lys Ser Gly Lys Thr Arg Val Asn Tyr
 260 265 270
 Ser Gly Asn Val Arg Phe Ser Asp Ala Ile Gln Ile Pro Glu Met Val
 275 280 285
 Asp Ser Tyr Thr Phe Ala Gln Tyr Phe Asn Arg Ala Asn Thr Asn Asp
 290 295 300
 Gly Gly Gly Leu Val Phe Asp Glu Ala Ala Leu Glu Arg Ile Lys Asn
 305 310 315 320
 Tyr Gln Thr Gly Lys Tyr Thr Asp Pro Asn Thr Pro Glu Tyr Tyr Gly
 325 330 335
 Ala Lys Ala Gly Asn Asp Gly Lys Trp Gln Asn Tyr Thr Gly Ser Phe
 340 345 350
 Ala Asn Thr Asp Trp Phe Lys Glu Phe Tyr Lys Asn Trp Val Pro Ser
 355 360 365
 Thr Glu His Asn Leu Asn Ile Ser Gly Gly Thr Asp Lys Leu Thr Tyr
 370 375 380
 Met Ile Ser Gly Ser Phe Leu Asp Gln Lys Gly Leu Leu Arg His Gly
 385 390 395 400
 Glu Asp Gln Phe Asn Arg Tyr Thr Met Asn Ala Lys Ile Ser Ala Lys
 405 410 415
 Leu Thr Asp Trp Val Thr Leu Asn Tyr Thr Ser Lys Trp Thr Arg Glu
 420 425 430
 Asp Tyr Asp Arg Pro Thr Tyr Met Thr Gly Leu Phe Phe His Asn Ile
 435 440 445
 Ala Arg Arg Trp Pro Thr Cys Pro Val Arg Asp Pro Asn Gly His Tyr
 450 455 460
 Gln Gln Lys Met Glu Ile Ile Glu Met Glu Asp Gly Gly Lys Gln Thr
 465 470 475 480
 Ser Gln Lys Asn Trp Tyr Thr Gln Gln Leu Gln Ala Ile Phe Glu Pro
 485 490 495
 Ile Lys Asp Trp Arg Ile Val Ala Glu Gly Ser Met Arg Thr Tyr Thr
 500 505 510
 Arg Lys Gln Ser Trp Ala Val Leu Pro Ile Tyr Ala Tyr Asp Ala Asp
 515 520 525
 Asn Gln Pro Tyr Leu Leu Gly Trp Gly Asp Asn Ala Ala Gly Tyr Ser
 530 535 540
 Glu Val Gln Asp Ser Arg Glu Ser Glu Asp Tyr Phe Ser Thr Asn Ile
 545 550 555 560
 Tyr Thr Asp Phe Ala Lys Thr Phe Gly Asp His Asn Phe Lys Ile Met
 565 570 575
 Val Gly Phe Asn Gly Glu Leu Tyr Arg Pro Ser Gly Leu Thr Gly Phe
 580 585 590
 Gly Thr Asp Leu Ile Ser Pro Glu Val Pro Ser Leu Gly Leu Thr Gln
 595 600 605
 Asp Asn Lys Lys Ala Ser Ser Trp Ala Ser Glu Lys Ala Ile Ala Gly
 610 615 620
 Phe Phe Gly Arg Leu Asn Tyr Asn Tyr Lys Glu Arg Tyr Met Leu Glu
 625 630 635 640
 Ala Asn Leu Arg Tyr Asp Gly Ser Ser Arg Phe Ile Gly Asp Lys Arg
 645 650 655
 Trp Gly Leu Phe Pro Ser Phe Ser Ala Gly Trp Asn Ile Ser Arg Glu
 660 665 670
 Ala Phe Phe Glu Pro Leu Thr Gln Val Val Gly Thr Leu Lys Leu Arg
 675 680 685
 Gly Ser Trp Gly Gln Leu Gly Asn Asn Thr Ser Glu Thr Asn Ala

690	695	700	
Trp	Tyr Pro Phe Tyr	Gln Asn Met Pro Thr Gly Ser Ala Ser Ser Gly	
705	710	715	720
Trp	Leu Ile Asn Gly Lys	Gln Asn Val Ala Gly Leu Pro Gly Ile	
	725	730	735
Val	Ser Ser Leu Met Thr Trp	Glu Thr Ile Glu Ser Trp Asn Val Gly	
	740	745	750
Ile	Asp Trp Gly Leu Phe Asp	Asn Arg Leu Thr Gly Ser Phe Asp Tyr	
	755	760	765
Tyr	Asn Arg Tyr Thr Tyr	Asp Met Ile Gly Pro Ala Pro Thr Leu Pro	
	770	775	780
Ser	Val Leu Gly Ala	Ser Ala Pro Gln Ile Asn Asn Cys Asp Met Lys	
785	790	795	800
Ser	Tyr Gly Trp Glu	Leu Glu Leu Ser Trp Arg Asp Arg Ile Gln Gln	
	805	810	815
Phe	Asn Tyr Gly Val Arg	Leu Val Met Ser Asp Asn Met Gln Lys Ile	
	820	825	830
Leu	Glu Tyr Pro Asn Lys	Thr Ser	
	835	840	

<210> 10243

<211> 62

<212> PRT

<213> *B. fragilis*

<400> 10243

Phe	Arg	Thr	Ile	Ser	Thr	Ser	Gln	Thr	Arg	Gln	Lys	Arg	Tyr	Tyr	Lys
1								10						15	
Ile	Thr	Leu	Ile	Arg	Gln	Ala	Tyr	Gly	Val	Glu	Thr	Lys	Lys	Thr	Leu
							20			25				30	
Lys	His	His	Phe	Arg	Gln	Asp	Lys	Ser	Leu	Pro	Glu	Lys	Ser	Gln	Lys
							35			40				45	
Thr	Asn	Tyr	Ser	Asn	Leu	Cys	Leu	Thr	Glu	Gln	Phe	Ser	Val		
							50			55				60	

<210> 10244

<211> 191

<212> PRT

<213> *B. fragilis*

<400> 10244

Ala	Thr	Val	Asp	Thr	Ser	Ser	Pro	Val	Val	Lys	Thr	Cys	Leu	Leu	Ser
1				5					10					15	
Pro	His	Arg	Asn	Ser	Pro	Met	Asn	Arg	Val	Asp	Ile	Glu	Glu	Tyr	Leu
					20				25				30		
Cys	Arg	Val	Phe	His	Leu	Gln	Arg	Val	Leu	Trp	Leu	Asp	His	Gly	Tyr
					35				40				45		
Leu	Ser	Gly	Asp	Asp	Thr	Asp	Ser	His	Ile	Asp	Thr	Leu	Ala	Arg	Phe
					50				55				60		
Cys	Ser	Pro	Asp	Thr	Ile	Ala	Tyr	Val	Lys	Cys	Thr	Asp	Ser	Glu	Asp
					65				70				75		80
Glu	His	Tyr	Glu	Ala	Leu	Cys	Lys	Met	Glu	Glu	Gln	Leu	Lys	Thr	Phe
					85				90					95	
Arg	Thr	Thr	Ser	Gly	Ala	Pro	Tyr	Arg	Leu	Leu	Ala	Leu	Pro	Met	Ala
					100				105					110	
Asp	Lys	Ile	Glu	Val	Glu	Gly	Glu	Arg	Leu	Pro	Ala	Thr	Tyr	Ala	Asn
					115				120					125	
Phe	Leu	Ile	Met	Asn	Asp	Val	Val	Leu	Tyr	Pro	Thr	Tyr	Asn	Gln	Pro
					130				135				140		

Glu Asn Asp Lys Leu Ala Lys Glu Val Leu Cys Glu Ala Phe Pro Thr
 145 150 155 160
 Tyr Glu Val Val Gly Ile Asp Cys Arg Ala Leu Ile Lys Gln His Gly
 165 170 175
 Ser Leu His Cys Val Thr Met Gln Tyr Pro Thr Gly Val Ile Lys
 180 185 190

<210> 10245

<211> 202

<212> PRT

<213> B.fragilis

<400> 10245

Lys Ala Arg Leu Leu Ile Asp Pro Gly Glu Asp Ser Tyr Arg Leu Val
 1 5 10 15
 Asp Leu Pro Asn Gly Glu Glu Leu Arg Ala Gln Ala Gln Lys Glu Phe
 20 25 30
 Asn Leu Thr Asp Ser Glu Thr Lys Ala Leu Ala Asn Tyr Lys Leu Tyr
 35 40 45
 Gly Asn Leu Asp Lys Gly Val Val Arg Gly Phe Glu Val Asn Ala Ala
 50 55 60
 Thr Asn Leu Gly Ala Gly Phe Ser Leu Asn Gly Asn Tyr Ala Tyr Ala
 65 70 75 80
 Tyr Ala Arg Gly Lys Ser Val Asp Gly Val Trp Gly Asn Ile Asp Arg
 85 90 95
 Ser Val Arg His Thr Gly Thr Val Ala Gly Asn Tyr Thr His Ala Trp
 100 105 110
 Asn Asp Tyr Met Leu Asn Val Asn Ile Asn Gly Arg Phe Gln Ser Lys
 115 120 125
 Arg Phe His Pro Gly His Ser Tyr Gly Asp Ala Pro Gly Tyr Gly Val
 130 135 140
 Trp Asn Leu Asn Val Lys His Ser Leu Thr Gly Phe Gln His Leu Gly
 145 150 155 160
 Leu Asp Phe Gly Met Gly Leu Asp Asn Ile Phe Asn Lys Arg Asp Thr
 165 170 175
 Arg Pro Asn Gly Val Asn Tyr Ala Leu Leu Ser Pro Gly Arg Met Ala
 180 185 190
 Tyr Val Ser Leu Thr Leu Arg Phe Lys Lys
 195 200

<210> 10246

<211> 1095

<212> PRT

<213> B.fragilis

<400> 10246

Cys Ser Arg Phe Cys His Tyr Lys Phe Leu Leu Tyr Met Lys Ala Tyr
 1 5 10 15
 Arg Leu Lys Ile Thr Cys Phe Ile Leu Leu Leu Pro Val Leu Thr
 20 25 30
 Cys Cys Thr Asp Glu Glu Leu Leu Arg Gly Ser Gly Val Pro Glu Gly
 35 40 45
 Val Pro Thr Thr Val Asp Ile Ser Val Gly Thr Ala Ala Asn Arg Ala
 50 55 60
 Lys Thr Arg Ser Gly Leu Pro Glu Gly Glu Arg Lys Ile Tyr Asp
 65 70 75 80
 Leu Tyr Leu Trp Val Phe Asp Ser Arg Gly Gly Val Glu Phe Ser Arg
 85 90 95
 Glu Tyr Pro Arg Ala Glu Leu Tyr Gln Ala Ala Ala Leu Glu Thr

100	105	110
Ala Thr Gly Glu Lys Asp Thr Asp Ala Pro Thr Ser Met	Gly	Leu Leu
115	120	125
Lys Asn Ile Pro Ile Thr Ser Gly Glu Lys Thr Leu Val	Leu	Leu Ala
130	135	140
Asn Tyr Lys Ser Asp Gly Asp Gly Leu Phe Gln Val	Glu	Pro Gly Ile
145	150	155
Leu Ala Gly Val Ser Ser Leu Ser Asp Ile Gln Arg Val	Lys	Ala Glu
165	170	175
Met Thr Ala Arg Thr Leu Phe Arg Pro Asn Gly Asn	Leu	Leu Met Ser
180	185	190
Val Thr Lys Thr Glu Glu Ile Ser Pro Asp Thr Arg Arg	Leu	Glu Val
195	200	205
Ser Leu Lys Arg Ala Glu Ala Lys Ile Thr Ile Asn Leu	Lys	Thr Gly
210	215	220
Glu Gly Leu Thr Phe Val Pro Gly Thr Trp Arg Val	Gly	Asn Val Pro
225	230	235
Ala Ser Thr Phe Val Thr Glu His Val Lys Gly Ser Asp	Ala	Gly Ala
245	250	255
Pro Trp Asp Ala Gly Gly Met Glu Met Asp Ser Tyr Trp	Leu	Ser Glu
260	265	270
Leu Phe Gln Phe Glu Gly Asp Ala Thr Thr Thr Thr	Thr	Phe Tyr
275	280	285
Leu Pro Glu Asn Arg Lys Leu Ala Lys Lys Met Ile	Thr	Pro Ala Ser
290	295	300
Pro Gly Tyr Asn Ala Glu Arg Lys Gly Tyr Asp Leu	Arg	Gln Lys Gln
305	310	315
Val Lys Ser Pro Val Pro Asp Ala Thr Glu Lys Pro	Asn Val	Gln Asn
325	330	335
Gly Ala Thr Glu Tyr Ala Pro Asp Leu Ala Pro Tyr	Ile	Glu Phe Thr
340	345	350
Gly Glu Leu Arg Gln Asp Met Thr Thr Gly Glu Val	Ser	Thr Glu Arg
355	360	365
Phe Gly Arg Val Thr Tyr Arg Val Tyr Leu Gly Tyr	Thr	Ala Glu Asn
370	375	380
Asp Pro Val Asn Asp Tyr Asp Ile Glu Arg Asn Val	His	Tyr Thr Tyr
385	390	395
Asn Val Thr Ile Lys Gly Met Asn Asp Leu Val Val	Glu	Ala Met Ser
405	410	415
Asp Lys Asp Arg Glu Glu Pro Ala Pro Gly Val	Glu	Leu Val
420	425	430
Tyr Asp Ala His Arg Ser Phe Ser Phe Asp Cys His	Tyr	Glu Gln Gly
435	440	445
Leu Met Arg Phe Asn Lys Asp Glu Leu Ala Ile Phe	Asn	Pro Asp Gly
450	455	460
Ser Leu Lys Asp Asp Ala Met Ile Ser Phe Ala Ile	Arg	Thr Pro Phe
465	470	475
Cys Asp Lys Ile Val Ser Tyr Thr Lys Ala Glu Leu	Glu	Gln Leu Glu
485	490	495
Asp Asn Gly Tyr Val Pro Ser Gly Glu Lys Lys Ala	Asp	Thr Gly Trp
500	505	510
Leu Ala Phe Phe Ile His Pro Ser Thr Leu Ser Asp	Asn	Gly Asn Glu
515	520	525
Thr Met Glu Tyr Tyr Ser Asn Thr Gly Ala His	Leu	Leu Ser Leu Glu
530	535	540
Gln Phe Leu Tyr Arg Leu Val Lys Glu Pro Asp	Tyr	Val Phe Asn Ala
545	550	555
Ser Thr Gly Leu Cys Lys Val Thr Val Tyr Ala Asn	Glu	Tyr Phe Tyr
565	570	575

Glu Arg Asn Pro Met Arg Asp Gly Ala Pro Glu Asp Lys Asn Leu Trp
 580 585 590
 Lys Thr Phe Ala Asn Ala Pro Asp Arg Thr Phe Asp Leu Leu Val Asn
 595 600 605
 Thr Ser His Glu Ile Ser Pro Asp Gly Gln Ser Arg Tyr His Gln Ala
 610 615 620
 Val Val Ser Ile Arg Gln Met Ser Ile Lys Thr Val Phe Thr Glu Gly
 625 630 635 640
 Pro Glu Gly Met Arg Val Trp Gly Val Glu Asn Val Asn Glu Thr Pro
 645 650 655
 Asp Leu Asp Phe Met Val Lys Ala Pro Gly Glu Pro Asp Ala Phe Tyr
 660 665 670
 Asn Lys Tyr Thr Ser Asn Gly Trp Ser Asn Thr Trp Lys Val Met Ala
 675 680 685
 Arg Ser Gly Asp Phe Ser Gln Glu Val Met Ile Asp Pro Met Arg Arg
 690 695 700
 Ser Lys Gln Asp Gln Leu Trp Gln Val Met Thr Lys Val Asp Asn Ala
 705 710 715 720
 Lys Leu Thr Leu Ser Arg Asp His Tyr Asn Leu Ala Ala Lys Asn Tyr
 725 730 735
 His Ala Glu Tyr Ala Cys Phe Thr Pro Phe Leu Arg Asn Arg Asp Asp
 740 745 750
 Asn Arg Asp Gly Arg Met Gln Ala Ala Glu Met Lys Trp Tyr Ile Pro
 755 760 765
 Ser Val Ser Glu Ser Gly Met Leu Leu Val Gly Glu Arg Ala Leu Pro
 770 775 780
 Leu His Ser Arg Leu His Gly His Ala Pro Ser Asp Asn Ala Thr Ala
 785 790 795 800
 Phe Tyr Met Ser Arg Ala Phe Met Ala Ser Thr Asn Leu Ser Leu Tyr
 805 810 815
 Ser Ser Asn Pro Tyr Ile Cys Ile Leu Glu Ser Arg Ser Val Thr Pro
 820 825 830
 Ile Ala Asn Phe Asp Tyr Tyr Lys Gly Gly Asn Ser Pro Gly Asp Arg
 835 840 845
 Thr Pro Tyr Ser Glu Val Arg Leu Ile Arg Asp Leu Gly Met Leu Glu
 850 855 860
 Ser Gly Glu Glu Ser Tyr His Ile Glu Glu Leu Gly Lys Glu Leu Asn
 865 870 875 880
 Lys Ser Leu Val Asn Asn Arg Thr Lys Glu Glu Tyr Leu Val Phe Arg
 885 890 895
 Ala Asp Asn Leu Pro Tyr Ser Met Thr Arg Gly Val Arg Ala Ile Tyr
 900 905 910
 Glu Leu Pro Ala His Asp Glu Asp Ser Gln Ser Asn Thr Ile Tyr Lys
 915 920 925
 Asn Gly Phe Glu Val Ala Lys Tyr Ile Ala Asn Lys Ile Asp Lys Pro
 930 935 940
 Lys Asp Leu Asn Asn Pro Asp Arg Lys Ser Glu Tyr Tyr Leu Gln Asp
 945 950 955 960
 Trp Ser Thr Leu Met Ala Asp Ile Glu Gln Gly Asn Ser Pro Cys Ala
 965 970 975
 Tyr Tyr Tyr Gln Glu Ala Asp Lys Ser Asp Leu Gly Thr Trp Arg Val
 980 985 990
 Pro Asn Glu Val Glu Leu Ile Ile Met Cys Gly Ser Leu Phe Asp Trp
 995 1000 1005
 His Asn Pro Glu Lys Lys Glu Val Tyr Glu Phe Gly Asn Asp Leu Pro
 1010 1015 1020
 Ser Leu Gly Val Val Glu Ser Glu Val Leu His Ser Arg Thr Gly Phe
 1025 1030 1035 1040
 Ser Lys Arg Ser Met Asn Gly Ala Arg Ser Phe Ser Ala Gly Tyr Gln

6078

1045	1050	1055
Met Tyr Leu His Gly Tyr Leu Arg Trp Val Thr Thr Val Asp Thr Gln		
1060	1065	1070
Trp Ala Gly Asp Asn Asp Arg Leu Val Asn Asn Arg Lys Gly Tyr Val		
1075	1080	1085
Arg Cys Val Arg Asp Leu Glu		
1090	1095	

<210> 10247

<211> 89

<212> PRT

<213> B.fragilis

<400> 10247

Ile Lys Ile Ser Leu Gln Asn Tyr Ile Trp Tyr Ile Arg Val Glu Leu			
1	5	10	15
Phe Ser Met Leu Ser Glu Leu Ile Gly Asn Phe Met Lys Lys Gly Glu			
20	25	30	
Tyr Leu Arg His Met Arg Val Phe Ser Ser Val Arg Phe Pro Arg Gly			
35	40	45	
Tyr Ser Cys Val Ala Leu Tyr Gln Glu Val Val Pro Phe Ser Lys Ala			
50	55	60	
Met Gly Leu Val Leu Gly Ser Glu Ile Val Ile Pro Glu Lys Val Cys			
65	70	75	80
Met Gly Arg Gly Pro Leu Val Leu Glu			
85			

<210> 10248

<211> 136

<212> PRT

<213> B.fragilis

<400> 10248

Lys Lys Met Ser Lys Ser Ser Phe Leu Leu Asp Phe Lys Ala Phe Val			
1	5	10	15
Met Arg Gly Asn Val Val Asp Met Ala Val Gly Val Ile Ile Gly Gly			
20	25	30	
Ala Phe Gly Lys Ile Ile Ser Ser Val Val Ala Asp Ile Ile Met Pro			
35	40	45	
Pro Ile Gly Leu Leu Val Gly Gly Thr Asn Phe Ser Glu Leu Arg Trp			
50	55	60	
Glu Leu Glu Pro Ala Arg Val Val Asp Gly Val Glu Gln Ala Ala Val			
65	70	75	80
Thr Ile Asn Tyr Gly Asn Phe Ile Gln Thr Met Leu Asp Phe Val Ile			
85	90	95	
Ile Ala Phe Ala Ile Phe Leu Phe Ile Arg Leu Leu Ser Asn Leu Arg			
100	105	110	
Arg Lys Lys Glu Glu Thr Pro Phe Ala Pro Thr Cys Pro Glu Gln Arg			
115	120	125	
Gly Lys Val Thr Phe Arg Asn Thr			
130	135		

<210> 10249

<211> 93

<212> PRT

<213> B.fragilis

<400> 10249

Arg His Ile Pro Glu Ala Asn Ser Trp Gln Glu Gly His Pro His Pro

1	5	10	15												
Lys	Ile	Gln	Leu	Thr	Val	Glu	Tyr	Tyr	Thr	Gly	Gly	Asn	Ile	Ser	Gln
				20			25						30		
Thr	Arg	Thr	Arg	Thr	Phe	Leu	Leu	Asp	Ile	Gly	Glu	Glu	Ser	Ser	Pro
				35			40					45			
Gly	Val	Tyr	Ser	Gly	Pro	Ile	Tyr	Pro	Asn	Arg	Asp	Tyr	Lys	Val	Phe
				50			55				60				
Met	Val	Leu	Pro	Glu	Ala	Ala	Asp	Arg	Glu	Ile	Ile	Tyr	Arg	Val	Glu
				65			70			75			80		
Ser	Trp	Glu	Arg	Lys	Asp	Val	Glu	Phe	Pro	Pro	Phe	Gln			
				85				90							

<210> 10250

<211> 176

<212> PRT

<213> B.fragilis

<400> 10250

1	5	10	15												
Leu	Arg	Ala	Pro	Gly	Glu	Glu	Arg	Ala	Arg	Ala	Asp	Gly	Gln	Gly	Ala
Cys	Val	Tyr	Gln	Ile	Val	Lys	Asp	Lys	Arg	Ile	Asp	Asp	Val	Glu	Met
				20			25			30					
Thr	Gly	Gln	Trp	Glu	Thr	Ala	Leu	Ala	Lys	Ile	Glu	Ser	Gly	Glu	Met
				35			40			45					
Asn	Pro	Asp	Ser	Leu	Arg	Lys	Ala	Ile	Glu	Gly	Tyr	Ala	Ala	Gln	Ile
				50			55			60					
Thr	Glu	Glu	Leu	Leu	Gln	Val	Gln	Val	Ser	Val	Ala	Asp	Gly	Gly	His
				65			70			75			80		
Ile	Pro	Cys	Pro	Lys	Cys	Arg	Ser	Gly	Arg	Ile	Leu	Leu	Tyr	Pro	Lys
				85			90			95					
Val	Ala	Lys	Cys	Ser	Asn	Val	Asp	Cys	Ser	Leu	Thr	Val	Phe	Arg	Asn
				100			105			110					
Lys	Gly	Glu	Lys	Gln	Leu	Thr	Asp	Ser	Gln	Ile	Thr	Asp	Leu	Val	Thr
				115			120			125					
Lys	Gly	Arg	Thr	Ala	Leu	Ile	Lys	Gly	Phe	Arg	Ser	Arg	Glu	Asp	Lys
				130			135			140					
Pro	Phe	Asp	Ala	Tyr	Leu	Thr	Phe	Asp	Lys	Asp	Phe	Arg	Ile	Val	Tyr
				145			150			155			160		
Gly	Phe	Pro	Pro	His	Thr	Asp	Lys	Ser	Lys	Gly	Lys	Glu	His	Arg	Arg
				165			170			175					

<210> 10251

<211> 67

<212> PRT

<213> B.fragilis

<400> 10251

1	5	10	15												
Phe	Phe	Thr	Thr	Met	Lys	Glu	Tyr	Cys	Val	Tyr	Trp	Phe	Glu	Asn	Gly
Glu	Pro	Arg	His	Glu	Val	Phe	Ser	Cys	Leu	Asp	Gly	Ala	Glu	Met	Phe
				20			25			30					
Ser	Cys	Met	Ile	Arg	Gly	Gln	Asp	Gly	Val	Glu	His	Val	Glu	Ile	Ser
				35			40			45					
Glu	Glu	Asp	Ile	Ser	Ala	Pro	Glu	Glu	Phe	Arg	Glu	Ile	Cys	Pro	Gly
				50			55			60					
Asp	Phe	Ser													
	65														

<210> 10252

<211> 721
 <212> PRT
 <213> B.fragilis

<400> 10252

Leu Lys Arg Thr Leu Tyr Thr Asn Ala Lys Ala Asp His Met Val Arg
 1 5 10 15
 Lys Glu Glu Ile Leu Ala Lys Thr Gly Asn Gly Leu Glu Val Phe Arg
 20 25 30
 His Tyr Leu Pro Val Lys Trp Arg Val Gly Arg Asn Phe Leu Asn Pro
 35 40 45
 Leu Tyr Ala Asp Gly Arg Ala Ser Cys Asn Val Tyr Tyr Asp Arg His
 50 55 60
 Ser Gly Met Tyr Arg Met Lys Asp Phe Gly Asn Gly Glu Tyr Ser Gly
 65 70 75 80
 Asp Cys Phe Phe Leu Val Ala Lys Leu Lys Gly Leu Asp Cys Arg Ser
 85 90 95
 Ala Ala Asp Phe Val Glu Val Leu His Thr Ile Asp Arg Glu Leu Cys
 100 105 110
 Leu Gly Leu Asp Gly Ala Ile Pro Ser Gly Thr Asn Asn Arg Glu Gly
 115 120 125
 Ser Cys Arg Thr Thr Arg Pro Val Thr Gly Ala Arg Glu Lys Ser Glu
 130 135 140
 Gly Glu Asn Thr Gly Glu Ser Ile Pro Gly Asp Thr Val Thr Gly Thr
 145 150 155 160
 Glu Gly Lys Asp Leu Ser Arg Glu Arg Pro Gly Pro Ser Pro Tyr Gln
 165 170 175
 Val Ala Glu Lys Ser Phe Thr Glu Arg Glu Leu Ala Tyr Trp Gly Ile
 180 185 190
 Ser Gly Ile Thr Val Glu Val Leu His Arg Tyr Gly Val Val Ser Leu
 195 200 205
 Ala Glu Tyr Arg Ser Glu Thr Arg Glu Gly Lys Thr Phe Gly Phe Thr
 210 215 220
 Ser Thr Pro Ala Glu Pro Met Phe Gly Tyr Arg Gly Lys Trp Gly Val
 225 230 235 240
 Lys Val Tyr Arg Pro Leu Ser Glu Val Arg Phe Val Tyr Gly Gly His
 245 250 255
 Thr Gly Asp Asn Tyr Cys Phe Gly Leu Glu Gln Leu Pro Ser Lys Gly
 260 265 270
 Asp Leu Leu Phe Leu Thr Gly Glu Lys Asp Val Met Thr Leu Ala
 275 280 285
 Ala His Gly Phe Gln Ala Ile Cys Phe Asn Ser Glu Thr Ser Val Ile
 290 295 300
 Pro Ala Lys Thr Val Arg Lys Leu Val Tyr Arg Phe Lys His Ile Val
 305 310 315 320
 Leu Leu Tyr Asp Thr Asp Lys Thr Gly Leu Glu Cys Ser Glu Lys His
 325 330 335
 Arg Val Gln Leu Ser Glu Tyr Gly Val Lys Arg Leu Val Leu Pro Leu
 340 345 350
 Pro Gly Thr Lys Ser Glu Lys Asp Val Thr Asp Tyr Phe Lys Ala Gly
 355 360 365
 His Thr Arg Glu Asp Leu Met Gly Leu Phe Leu Lys Leu Leu Asp Thr
 370 375 380
 Leu Tyr Gly Asp Thr Met Ala Val Leu Lys Ser Cys Glu Ile Asp Tyr
 385 390 395 400
 Asp Cys Pro Pro Glu Gln Ala Val Ala Ile Val Thr Ala Gly Asp Val
 405 410 415
 Pro Leu Gly Ser Glu Glu Asn Ile Leu Cys Ile Thr Gly Glu Gly
 420 425 430

Thr Gly Lys Ser Asn Tyr Thr Ala Ala Leu Val Ala Gly Ala Ile Met
 435 440 445
 Glu Arg Glu Glu Asp Ala Asp Leu Leu Gly Val Lys Val Glu Pro Asn
 450 455 460
 Arg Lys Gly Arg Ala Val Leu Leu Tyr Asp Thr Glu Gln Ser Glu Gln
 465 470 475 480
 Gln Leu Tyr Lys Asn Thr Gly Arg Leu Leu Arg Arg Ala Gly Arg Glu
 485 490 495
 Lys Met Pro Pro Tyr Leu His Val Tyr Cys Leu Thr Gly Met Ser Arg
 500 505 510
 Asn Glu Arg Leu Thr Ala Ile Ile Gln Ser Met Asp Lys Tyr His Tyr
 515 520 525
 Leu His Gly Gly Ile His Leu Val Val Ile Asp Gly Val Ala Asp Leu
 530 535 540
 Ile Arg Cys Ser Asn Asp Glu Ala Glu Ser Val Ala Leu Val Asp Glu
 545 550 555 560
 Ile Tyr Arg Leu Ala Gly Ile Tyr Arg Thr Cys Ile Thr Ala Val Val
 565 570 575
 His Phe Val Pro Asn Gly Leu Lys Leu Arg Gly His Leu Gly Ser Glu
 580 585 590
 Leu Gln Arg Lys Ser Ala Ala Ile Leu Ser Ile Glu Lys Asp Glu Asn
 595 600 605
 Pro Glu Val Ser Val Val Lys Ala Leu Lys Val Arg Asp Gly Ser Pro
 610 615 620
 Leu Asp Ile Pro Leu Met Gln Phe Arg Trp Asp Lys Gln Ala Gly Met
 625 630 635 640
 Pro Val Tyr Met Gly Glu Lys Pro Arg Val Glu Lys Glu Arg Arg Lys
 645 650 655
 Glu Lys Glu Leu Ser Glu Met Ala Arg Ala Ala Phe Val Thr Gln Lys
 660 665 670
 Lys Tyr Gly Tyr Ile Glu Leu Cys Glu Leu Ile Gln Glu Thr Leu Asp
 675 680 685
 Val Lys Glu Arg Thr Ala Lys Gly Tyr Ile Arg Tyr Met Arg Glu Lys
 690 695 700
 Glu Ile Ile Glu Lys Glu Gly Asp Cys Tyr Val Tyr Gly Gln Arg Lys
 705 710 715 720
 Ile

<210> 10253
 <211> 140
 <212> PRT
 <213> B.fragilis

<400> 10253
 Ala Ile Arg Thr Lys Asp Val Gly Asp Asn Trp Arg Lys Pro Gly Gln
 1 5 10 15
 Asp Phe Leu Val Ser Lys Ser Phe Asp Val Thr Leu Arg Asp Phe Thr
 20 25 30
 Leu Ile Asp Glu Ile Leu Lys Arg Val Asp Thr Lys Gly Ile His Thr
 35 40 45
 Met Tyr Ile Asp Lys Leu Glu His Arg His Ile Leu Ser Tyr His Arg
 50 55 60
 Lys Gly Lys Ile Glu Ala Leu Lys Ala Ala Arg Glu Lys Ala Val Tyr
 65 70 75 80
 Leu Leu Glu Ala Ile Gly Lys Arg Pro Gly Glu Ile Ile Arg Ile Val
 85 90 95
 Glu Gly Gly Asp Ala Gly Lys Glu Met Phe Ala Gln Gly His Ile Leu
 100 105 110

Ser Val Ala Pro Pro Pro Phe Glu Arg Ser Arg Thr Ile Lys Lys Arg
 115 120 125
 Tyr Ser Met Leu Val Arg Phe Gly Ile Val Asp Arg
 130 135 140

<210> 10254

<211> 292

<212> PRT

<213> B.fragilis

<400> 10254

Pro Phe Ala Ala Ser Ala Ser Ser Thr Arg Arg Arg Cys Arg Ser Ser
 1 5 10 15
 Ser Ser Val Thr Thr Ser Pro Thr Pro Thr Ser Arg Cys Ser Gly Arg
 20 25 30
 Arg Ala Thr Trp Gly Thr Arg Arg Leu Val Thr Asn Arg Ala Gly Glu
 35 40 45
 Gln Val Glu Ala Leu Val Ser Arg Asn Phe Lys Thr Asn Glu Leu Val
 50 55 60
 Ala Phe Pro Leu Ser Lys Val Asn Ile Pro Ala Glu Lys Asn Gly His
 65 70 75 80
 Thr Phe Thr Pro Asp Glu Ile Ala Arg Leu Lys Gln Gly Glu Ala Val
 85 90 95
 Val Cys Gln Phe Leu Ser Arg Ala Lys Glu Gly Glu Gln Pro Lys Ile
 100 105 110
 Tyr Pro Ala Pro Val Gln Phe Ser Ala Ala Lys Met Gln Leu Glu Phe
 115 120 125
 Leu Phe Gly Asp Arg Gly Lys Leu Ala Met Asp Ala Tyr Lys Thr Asn
 130 135 140
 Leu Lys Gln Thr Ala Asn Gln Glu Val Pro Lys Thr Phe Arg Lys Gln
 145 150 155 160
 Glu Leu Thr Glu Lys Ser Arg Leu Glu Leu Glu Ala Gly Gly Thr Val
 165 170 175
 Lys Val Ser Gly Leu Val Asp Lys Lys Gly Lys Ala Tyr Gln Gly Tyr
 180 185 190
 Ile Thr Trp Lys Pro Gly Glu Lys Pro Ala Phe Met Phe Pro Lys Asp
 195 200 205
 Tyr Lys Ala Ala Leu Glu Gly Arg Val Lys Pro Ala Val Glu Asn
 210 215 220
 Glu Val Gln Val Ala Val Asn Ser Glu Gly Lys Thr Val Glu Ala Thr
 225 230 235 240
 Arg Asn Leu Lys Glu Ala Leu Gln Ser Ala Gln Gln Arg Pro Thr Gly
 245 250 255
 Glu Gln Lys Gln Gln Glu Arg Lys Gln Glu Gln Lys Glu Glu Arg
 260 265 270
 Lys Gln Ser Gln Lys Gln Glu Gln Pro Asp Lys Pro Lys Arg Ser Arg
 275 280 285
 Gly Val Arg Arg
 290

<210> 10255

<211> 281

<212> PRT

<213> B.fragilis

<400> 10255

Leu Arg Asn Asn Met Ile Glu Thr Tyr Phe Asn Asn Leu Met Gln Glu
 1 5 10 15
 Val Glu Arg Lys Met Gly Ile Glu Ser Ser Arg Met Glu Gly Glu Gln

20	25	30	
Val Ile Arg Thr Cys Gln Glu Met Val Ser Phe Leu Arg Glu Arg Ser			
35	40	45	
Arg Glu Leu Lys Asp Tyr Val Leu Asn His Pro Phe Ser Asn Val Glu			
50	55	60	
Glu Glu Ile Cys Phe Phe Lys Tyr Tyr Lys Pro Ala Leu Thr Gly Arg			
65	70	75	80
Leu Leu Tyr Tyr Arg Val Tyr Gln Ile Glu Ser Gly Cys Ser Cys			
85	90	95	
Cys Pro Glu Ile Ala Arg Met His Tyr Arg Lys Ala Met Lys Glu Tyr			
100	105	110	
Gln Arg Lys Leu Glu Arg Tyr Leu Pro Phe Tyr Gln Tyr Tyr Arg Ser			
115	120	125	
Gly Ala Thr Tyr Arg Asp His Tyr Tyr Phe Arg Arg Ala Lys Lys Glu			
130	135	140	
Leu Ser Pro Glu Ser Gly Ser Phe Met Leu Glu Glu Asp Ser Val Met			
145	150	155	160
Ser Thr Gly Tyr Asp Leu Leu Ala Ala Arg Leu Ile Ala Ala Glu Met			
165	170	175	
Leu Leu Gly Tyr Leu Asn Arg Lys Val Leu Leu Ala Met Glu Gly Ala			
180	185	190	
Tyr Ala Val Gln Glu Lys Glu His His Trp Thr Asp Arg Lys Ala Ala			
195	200	205	
Ala Val Glu Leu Ile Tyr Gly Ile Trp Ala Met Gly Ser Val Asp Asn			
210	215	220	
Gly Arg Val Ser Ile Val Glu Leu Val Met Leu Phe Glu Gln Met Phe			
225	230	235	240
His Ile Asp Leu Gly Asp Val Tyr His Thr Phe Ile Ser Met Arg Asn			
245	250	255	
Arg Lys Asn Ser Arg Thr Ala Tyr Leu Asp Gln Met Lys Glu Arg Leu			
260	265	270	
Leu Lys Arg Met Asp Glu Thr Asp Gly			
275	280		

<210> 10256

<211> 415

<212> PRT

<213> B.fragilis

<400> 10256

Ser Gly Cys Lys Ile Gly Pro Val Ser Thr Ile Phe Ser Pro Ile Asn			
1	5	10	15
Arg Ile Arg Lys Met Lys Ala Pro Arg Lys Ile Tyr Thr Trp Thr Ser			
20	25	30	
Ile Leu Leu Phe Val Cys Cys Ser Leu Ile Phe Leu Ser Cys Glu Lys			
35	40	45	
Glu Glu Leu Gly Glu Ala Met Glu Asn Arg Lys Thr Leu Phe Met Phe			
50	55	60	
Leu Pro Trp Ser Thr Asp Leu Thr Gly Tyr Phe Tyr Thr Asn Ile Ala			
65	70	75	80
Asp Met Glu Ala Cys Val Ser Arg Arg Gly Leu Glu His Glu Arg Ile			
85	90	95	
Leu Val Phe Met Ser Thr Ser Ser Thr Glu Ala Thr Met Phe Glu Ile			
100	105	110	
Ile His Ser Lys Gly Lys Cys Asp Arg Lys Thr Leu Lys Arg Tyr Gly			
115	120	125	
Thr Ser Gly Phe Thr Thr Val Glu Gly Ile Thr Gly Ile Leu Asn Asp			
130	135	140	
Val Gln Glu Phe Ala Pro Ala Pro Val Tyr Ala Met Ile Ile Gly Ser			

145	150	155	160
His	Gly	Met	Gly
Trp	Leu	Pro	Val
			Asp
		Gly	Thr
		Gln	Ala
		Asp	Ser
			Leu
165		170	175
Phe	Arg	Met	Lys
Lys			His
Trp		Glu	Tyr
		Gln	Glu
		Gln	Pro
			Leu
			Thr
			Arg
180		185	190
Tyr	Phe	Gly	Gly
Leu	Thr	Arg	Glu
Phe	Gln	Thr	Asp
		Val	Gly
			Thr
			Leu
195		200	205
Ala	Arg	Gly	Ile
Ile	Val	Gly	Ala
			Gly
		Val	Lys
			Met
			Glu
			Tyr
			Ile
			Leu
			Phe
210		215	220
Asp	Asp	Cys	Tyr
		Met	Ser
		Ser	Val
		Glu	Val
		Ala	Tyr
		Glu	Leu
		Lys	Glu
225		230	235
Ala	Thr	Arg	Phe
Leu	Ile	Ala	Ser
		Thr	Ser
		Glu	Met
		Met	Met
		Ala	Tyr
		Gly	
245		250	255
Met	Pro	Tyr	Ala
Thr	Val	Gly	Glu
Phe	Leu	Leu	Gly
			Asn
		Pro	Asp
		Tyr	
260		265	270
Gly	Ser	Leu	Cys
			Glu
			Gly
		Phe	His
		Asp	Phe
		Tyr	Ser
		Thr	Tyr
		Glu	Met
275		280	285
Met	Pro	Cys	Gly
Thr	Leu	Ala	Val
		Thr	Asp
		Cys	Ser
		Glu	Leu
		Asp	Asn
290		295	300
Met	Ala	Ala	Ile
		Met	Lys
		Ser	Ile
		Asn	Asp
		Arg	Tyr
		Val	Phe
		Asp	Asp
305		310	315
Ser	Leu	Gln	Gly
		Glu	Leu
		Gln	Gly
		Leu	Asp
		Gly	Tyr
		Thr	Pro
		Val	Ile
325		330	335
Phe	Tyr	Asp	Phe
Ala	Asp	Tyr	Val
		Leu	Thr
		Cys	Ser
		Asp	Pro
		Pro	Val
340		345	350
Leu	Thr	Ala	Arg
		Phe	Arg
		Glu	Gln
		Leu	Glu
		Arg	Leu
		Val	Pro
		Tyr	Lys
355		360	365
Thr	His	Thr	Gly
		Gly	Phe
		Tyr	Ser
		Arg	Thr
		Lys	Gly
		Pro	Leu
		Leu	Pro
370		375	380
His	Thr	Phe	Ser
		Gly	Ile
		Thr	Ile
		Ser	Asp
		Pro	Ser
		Thr	Asn
		Pro	Met
385		390	395
Ala	Leu	Leu	Lys
			Gly
		Thr	Thr
		Ser	Trp
		Tyr	Lys
		Ala	Thr
		Glu	
405		410	415

<210> 10257

<211> 85

<212> PRT

<213> B.fragilis

<400> 10257

His	Ala	Ala	Lys	Val	Phe	Phe	Leu	Val	Gln	Lys	Asn	Arg	Arg	Gly	Ala
1				5			10								15
Leu	Phe	Gly	Leu	Ser	Thr	Val	Ala	Ile	Tyr	Cys	Ile	Phe	Thr	Lys	Trp
					20			25							30
Arg	Ile	Gly	Lys	Gly	Asp	Leu	Ala	Thr	Cys	Tyr	Glu	Pro	Ala	Ser	Leu
					35			40							45
Phe	Leu	Val	Leu	Gln	Lys	Val	Ile	Arg	Pro	Phe	Arg	Pro	Phe	Val	Ser
					50			55							60
Thr	Asn	Val	Pro	Ser	Phe	Asp	Gln	Gly	Lys	Leu	Ser	Gly	Cys	Ser	Ser
					65			70							80
Gly	Tyr	Ala	Trp	Arg											
					85										

<210> 10258

<211> 232

<212> PRT

<213> B.fragilis

<400> 10258

Asn Ala Met Asn Arg Tyr Val Ser Glu Met Ile Gly Thr Met Val Leu
 1 5 10 15
 Val Leu Met Gly Cys Gly Ser Ala Val Phe Ala Gly Asp Met Pro Gly
 20 25 30
 Ala Val Thr Thr Gly Val Gly Thr Leu Gly Val Ala Ile Ala Phe Gly
 35 40 45
 Leu Ser Val Val Ala Met Ala Tyr Ala Ile Gly Gly Ile Ser Gly Cys
 50 55 60
 His Ile Asn Pro Ala Ile Thr Leu Gly Met Tyr Cys Ser Gly Gly Met
 65 70 75 80
 Gly Gly Lys Asp Ala Leu Leu Tyr Ile Ile Phe Gln Ile Ile Gly Gly
 85 90 95
 Ile Leu Gly Ser Ala Val Leu Phe Ile Leu Val Ser Thr Gly Pro His
 100 105 110
 Ala Gly Pro Thr Met Thr Gly Ser Asn Gly Phe Val Glu Gly Glu Met
 115 120 125
 Leu Gln Ala Phe Ile Ala Glu Ala Val Phe Thr Phe Ile Phe Val Leu
 130 135 140
 Val Ala Leu Gly Ala Thr Asp Lys Lys Gly Ala Gly Lys Leu Ala
 145 150 155 160
 Gly Leu Val Ile Gly Leu Thr Leu Val Leu Val His Ile Val Cys Ile
 165 170 175
 Pro Ile Thr Gly Thr Ser Val Asn Pro Ala Arg Ser Ile Gly Pro Ala
 180 185 190
 Leu Phe Glu Gly Gly Ala Ile Ser Gln Leu Trp Leu Phe Ile Val
 195 200 205
 Ala Pro Leu Thr Gly Gly Leu Ala Ser Ala Ile Val Trp Lys Ala Ile
 210 215 220
 Ser Gln His Ser Asp Arg Gln Arg
 225 230

<210> 10259

<211> 378

<212> PRT

<213> B.fragilis

<400> 10259

His Asn Met Asn Phe Glu Gln Leu Ala Thr Ile Ile Ala Asp Thr His
 1 5 10 15
 Gln Arg Leu Gln Gln Ser Ala Val Lys Ala Val Asn Gln Cys Gln Thr
 20 25 30
 Met Arg Asn Trp Leu Ile Gly Phe Tyr Ile Val Glu Phe Glu Gln Asn
 35 40 45
 Gly Glu Asp Arg Ala Lys Tyr Gly Glu Phe Leu Leu Lys Asn Leu Glu
 50 55 60
 Gln Lys Val Asn Leu Lys Gly Leu Asn Ile Thr Leu Phe Lys Arg Ser
 65 70 75 80
 Arg Val Phe Tyr Met Val Tyr Pro Gln Leu Ala Thr Val Ile Lys Thr
 85 90 95
 Ile Leu Pro Pro Thr Gly Ala Ser Thr Met His Leu Leu Glu Met Gln
 100 105 110
 Gly Leu Gly Lys Ser Ala Ser Leu Met His Leu Leu Gln Asn Ala Glu
 115 120 125
 Asn Lys Gln Asp Ile Val Asn Thr Ile Glu Pro Gln Lys Leu Leu Ser
 130 135 140
 Ser Ile Ser Phe Thr His Phe Ile Glu Leu Val Lys Ile Asp Asn Pro
 145 150 155 160
 Ile Lys Arg Met Tyr Tyr Glu Met Leu Thr Ile Gln Thr Gly Leu Ser
 165 170 175

Val Arg Glu Leu Lys Arg Gln Ile Gly Ala Leu Ser Tyr Glu Arg Val
 180 185 190
 Gly Leu Ser Gly Asn Met Glu Asn Ala Leu Ala Ala Ile Gln Gln Lys
 195 200 205
 Ile His Pro Gln Thr Val Thr Asp Ala Val Lys Asp Asp Tyr Phe Phe
 210 215 220
 Glu Phe Leu Asn Ile Pro Gln Gln Arg Ala Ser Leu Leu Lys Glu Lys
 225 230 235 240
 Glu Leu Glu Thr Leu Leu Leu Asp His Leu Arg Asp Phe Ile Ile Glu
 245 250 255
 Leu Gly Asn Gly Phe Cys Phe Glu Ala Arg Gln Lys Arg Ile Leu Ile
 260 265 270
 Gly Asp Glu Phe Tyr Phe Ile Asp Met Val Phe Tyr His Arg Ile Leu
 275 280 285
 Lys Cys His Ile Leu Cys Glu Leu Lys Val Asp Thr Phe Asn His Ala
 290 295 300
 His Val Ser Gln Leu Tyr Ser Tyr Leu Asn Tyr Tyr Lys Ala Glu Val
 305 310 315 320
 Met Glu Pro Gly Asp Asn Pro Pro Ile Gly Ile Leu Leu Val Thr Asp
 325 330 335
 Lys Asn Asp Ala Leu Val Arg Tyr Thr Thr Gly Leu Asp Glu Gln
 340 345 350
 Ile Phe Val Ser Lys Tyr Gln Leu Gln Leu Pro Thr Glu Gln Gln Leu
 355 360 365
 Lys Glu Leu Ile Leu Lys Thr Ile Arg Gln
 370 375

<210> 10260

<211> 120

<212> PRT

<213> B.fragilis

<400> 10260

Lys Leu Asn Leu Met Met Lys Lys Ile Phe Ile Ser Leu Phe Leu Ser
 1 5 10 15
 Gly Val Phe Met Tyr His Thr Asn Ala Gln Thr Ala Val Glu Gly Asn
 20 25 30
 Lys Phe Leu Asp Asn Trp Ser Ile Gly Ile Ser Ala Gly Gly Thr Thr
 35 40 45
 Pro Leu Thr His His Ser Phe Phe Gly Asn Met Arg Pro Ile Thr Glu
 50 55 60
 Ile Glu Leu Asn Lys Gln Leu Thr Pro Val Phe Gly Phe Gly Leu Glu
 65 70 75 80
 Ala Val Gly Ser Phe Asn Thr Ser Gln Ser Arg Thr Ile Phe Asp Arg
 85 90 95
 Ser Asn Val Ser Leu Leu Gly Leu Glu Asn Leu Asn Asn Leu Leu Gly
 100 105 110
 Thr Tyr Thr Gly Val Pro Arg Pro
 115 120

<210> 10261

<211> 138

<212> PRT

<213> B.fragilis

<400> 10261

Lys Ile Met Glu Ile Ile Ala Ile Glu Ser Ile Ala Phe Ala Thr Leu
 1 5 10 15
 Val Glu Lys Ile Glu Gly Ile Ala Ala Tyr Val Gln Ala Ser Gly Thr

20	25	30
Lys Glu Arg Glu Gln Trp Pro Val Ala Asp Lys Lys Gly Thr Arg Lys		
35	40	45
Ala Gly Leu Trp Met Thr Gly Lys Glu Val Cys Glu Gln Leu Glu Ile		
50	55	60
Ser Pro Arg Thr Leu Gln Arg Tyr Arg Thr Asn Arg Ile Ile Ala Tyr		
65	70	75
Ser Ile Cys Gly Arg Lys Ile Arg Tyr Arg Arg Thr Asp Val Glu Gln		
85	90	95
Phe His Glu Arg Trp Ile Arg Glu Thr Pro Asp Lys Leu Val Asp Arg		
100	105	110
Met Ile Glu Ala Tyr Pro Leu His Gln Cys Lys Ser Arg Ser Tyr Gly		
115	120	125
Lys Lys Arg Gly Asn Thr Gly Lys Asn Arg		
130	135	

<210> 10262

<211> 143

<212> PRT

<213> B.fragilis

<400> 10262

Arg Asn Gly Arg Arg Gly Thr Ser Val Thr Cys Gly Lys Arg Lys		
1	5	10
Leu Leu Lys Arg Arg Ala Thr Ala Met Tyr Met Asp Ser Glu Lys Phe		
20	25	30
Glu Asn Trp Met Glu Arg Ile Met Glu Arg Phe Asp Arg Thr Glu Lys		
35	40	45
Leu Leu Glu Arg Val Leu Lys Lys Ser Asn Ala Leu Asp Gly Glu Glu		
50	55	60
Val Leu Asp Asn Gln Asp Leu Cys Leu Leu Lys Val Gly Ile Arg		
65	70	75
Thr Leu Gln Arg Tyr Arg Ala Ile Gly Ile Leu Pro Tyr Phe Thr Ile		
85	90	95
Ser Gly Lys Val Phe Tyr Arg Val Lys Asp Val His Glu Phe Leu Arg		
100	105	110
Asn Gln Phe Ala Ala Val Glu Glu Arg Ala Ala Lys Arg Lys Glu Lys		
115	120	125
Glu Val Arg Lys Glu Glu Arg Arg Arg Lys Lys Gly Leu Phe Pro		
130	135	140

<210> 10263

<211> 235

<212> PRT

<213> B.fragilis

<400> 10263

Phe Asn Leu Arg Glu Ser Lys Ala Trp Thr Leu Ala Leu Lys Pro Ala		
1	5	10
Leu Val Tyr Asp Met Asn Ala Met Gly Ser Glu Ala Val Arg Phe His		
20	25	30
Ser Gly Arg Ala Val Trp Glu Ile Ser Val Gly Leu Lys Tyr His Phe		
35	40	45
Gly Cys Ser Asn Gly Lys His His Phe Thr Lys Val Arg Ala Tyr Asp		
50	55	60
Gln Gln Glu Val Asp Val Leu Asn Ala Lys Ile Asn Glu Leu His Thr		
65	70	75
Gln Ala Gly Lys Asp Ala Lys Ala Leu Gln Glu Ala Val Arg Lys Val		
85	90	95

Thr Glu Leu Glu Ala Ala Leu Asp Lys Cys Arg Asn Gln Glu Pro Lys
 100 105 110
 Ile Val Lys Asp Thr Ile Asp Asn Thr Lys Lys Thr Leu Glu Ser Val
 115 120 125
 Ile Thr Phe Arg Gln Gly Arg Thr Thr Val Asp Asn Ser Gln Leu Pro
 130 135 140
 Asn Val Glu Arg Ile Ala Thr Tyr Leu Lys Asn His Lys Gly Ala Ser
 145 150 155 160
 Val Leu Ile Lys Gly Tyr Ala Ser Pro Glu Gly Ser Val Glu Val Asn
 165 170 175
 Glu Arg Ile Ala Arg Gln Arg Ala Glu Ala Val Lys Lys Met Leu Val
 180 185 190
 Gly Lys Tyr Gly Ile Ala Glu Glu Arg Ile Val Ala Glu Gly Gln Gly
 195 200 205
 Val Gly Asn Met Phe Glu Glu Pro Asp Trp Asn Arg Val Ser Ile Cys
 210 215 220
 Thr Ile Asn Ala Gly Thr Glu Ser Ser Ser Arg
 225 230 235

<210> 10264

<211> 91

<212> PRT

<213> B.fragilis

<400> 10264

Thr Val Met Arg Val Phe Asn Leu Leu Leu Ile Ser Met Phe Ser
 1 5 10 15
 Pro Ile Pro Leu Pro Ala Gln Val Gly Glu Arg Tyr Ile Glu Val Ala
 20 25 30
 Gly Thr Ser Glu Ile Glu Val Val Pro Asp Arg Ile His Tyr Val Ile
 35 40 45
 Glu Ile Arg Gln Tyr Phe Glu Val Glu Phe Asp Gly Val Ser Glu Pro
 50 55 60
 Glu Glu Tyr Arg Thr Lys Val Pro Leu Thr Arg Ile Glu Glu Gln Leu
 65 70 75 80
 Lys Gln Val Leu Thr Ile Val Gly Val Pro Arg
 85 90

<210> 10265

<211> 87

<212> PRT

<213> B.fragilis

<400> 10265

Pro Val Asn Arg Leu Ile Asp Ser Thr His Asp Lys Met Lys Asp Tyr
 1 5 10 15
 Tyr Phe Ile Met Asn Ala Gly Val Lys Ala Gly Gly Glu Ile Thr His
 20 25 30
 Ala Val Leu Glu Gly Lys Ile Val Ser Ala Pro Lys Gly Tyr Asp Ala
 35 40 45
 Phe Thr Gly Ile Glu Ala Ala Arg Glu Lys Leu Ala Cys Gly Asn Ile
 50 55 60
 Arg Gln Gln Met Glu Glu Phe Gly Ile Glu Leu Glu Ile Val Pro Val
 65 70 75 80
 Asn Thr Asp Phe Leu Leu Arg
 85

<210> 10266

<211> 143

<212> PRT
 <213> B.fragilis

<400> 10266

Glu	Gly	Ala	Gly	Val	Arg	Thr	Glu	Arg	Arg	Gln	Asp	Met	Gly	Cys	Thr
1				5				10				15			
Val	Glu	Arg	Ser	Ala	Gly	Gly	Arg	Glu	Asn	Pro	Asn	Gly	Val	Arg	Glu
	20						25					30			
Asp	Val	Ile	Lys	Lys	Gln	Pro	Ala	Asp	Leu	Gly	Ile	Ile	Lys	Glu	Ala
		35						40				45			
Trp	Gln	Val	Leu	Leu	Ile	Ala	Lys	Ile	Thr	Glu	Ile	Val	Gly	Thr	Thr
		50					55					60			
Asn	Ile	Arg	Ile	Leu	Gln	Met	Arg	Asn	Tyr	Val	Leu	Arg	Ile	Cys	Tyr
	65					70			75			80			
Tyr	Cys	Arg	Ile	Val	Phe	Lys	Ile	Asn	Ser	Phe	Asn	Cys	Cys	Ser	Val
			85					90				95			
Gly	Ser	Cys	Asn	Trp	Tyr	Leu	Glu	Thr	Asn	Ile	Cys	Ser	Ser	Asn	Pro
		100					105					110			
Val	Val	Val	Tyr	Arg	Thr	Asn	Ala	Ser	Phe	Leu	Ser	Val	Thr	Ser	Lys
		115					120					125			
Met	Pro	Ile	Gly	Gly	Leu	Ser	Pro	Gly	Ser	Ile	Thr	Ser	Ala	Leu	
		130					135					140			

<210> 10267
 <211> 98
 <212> PRT
 <213> B.fragilis

<400> 10267

Asn	Ser	Asp	Met	Thr	Lys	Ala	Asp	Ile	Ile	Asn	Arg	Val	Ser	Glu	Glu
1				5				10			15				
Leu	Gly	Ile	Asp	Arg	Arg	Thr	Val	Gly	Leu	Val	Ile	Glu	Ser	Phe	Met
			20				25				30				
Lys	Cys	Val	Lys	Asp	Ala	Leu	Gly	Arg	Glu	Arg	Ile	Val	Phe	Leu	Arg
	35					40				45					
Gly	Phe	Gly	Thr	Phe	Ser	Leu	Lys	Lys	Arg	Ala	Ala	Lys	Lys	Ala	Gln
	50					55			60						
Asn	Ile	Gln	Gln	His	Thr	Thr	Ile	Cys	Ile	Pro	Ala	Arg	Lys	Val	Pro
	65					70			75			80			
His	Phe	Lys	Pro	Ser	Glu	Ser	Phe	Leu	Val	Leu	Arg	Lys	Glu	Asp	Asn
			85					90				95			
Arg	Lys														

<210> 10268
 <211> 81
 <212> PRT
 <213> B.fragilis

<400> 10268

Gln	Val	Arg	Ile	Thr	Cys	Ser	Pro	Ser	Ile	Arg	Glu	Asp	Ser	Met	Pro
1				5				10			15				
Ile	Leu	Arg	Ser	Thr	Ser	Cys	Ile	Lys	Leu	Leu	Lys	Tyr	Val	Ser	Ile
			20				25				30				
Met	Leu	Phe	Leu	Asn	Tyr	Gly	Ala	Arg	Glu	Tyr	Leu	His	Ala	Thr	Arg
	35						40				45				
Phe	Ile	Phe	Met	Pro	Arg	Leu	Ile	Arg	Ser	Gln	Val	Phe	Leu	Ser	Ala
	50					55				60					
Leu	Tyr	Asp	Glu	Lys	Thr	Phe	Pro	His	Ile	Glu	Lys	Thr	Gly	Glu	Lys

65
Pro

70

75

80

<210> 10269

<211> 546

<212> PRT

<213> B.fragilis

<400> 10269

Arg Asn Met Ile Thr Ala Val Ile Ala Glu Lys Pro Ser Val Ala Lys
 1 5 10 15
 Asp Ile Ala Asn Val Leu Asn Val Arg Glu Arg His Asp Gly Tyr Leu
 20 25 30
 Ser Gly Asn Gly Tyr Leu Val Thr Trp Ala Phe Gly His Leu Val Gln
 35 40 45
 Leu Ala Met Pro Glu Ala Tyr Gly Tyr Ala Gly Phe Arg Arg Glu Asn
 50 55 60
 Leu Pro Ile Leu Pro Gln Glu Phe Lys Tyr Ile Pro Arg Gln Ile Arg
 65 70 75 80
 Glu Gly Lys Glu Tyr Lys Pro Asp Pro Gly Val Leu Lys Gln Leu Lys
 85 90 95
 Val Ile Arg Glu Val Phe Asp Arg Ser Asp Arg Ile Val Val Ala Thr
 100 105 110
 Asp Ala Gly Arg Glu Gly Glu Ala Ile His Arg Tyr Ile Tyr Asn Tyr
 115 120 125
 Leu Gly Cys Arg Lys Pro Cys Leu Arg Leu Trp Ile Ser Ser Leu Thr
 130 135 140
 Asp Arg Ala Ile Arg Glu Gly Leu Asp Asn Leu Lys Ile Gly Ser Asp
 145 150 155 160
 Tyr Asp Asn Leu Tyr Arg Ala Ala Glu Ala Arg Ala Ile Ala Asp Trp
 165 170 175
 Glu Ile Gly Leu Asn Ala Thr Gln Ala Leu Ser Ile Ala Ala Gly Gln
 180 185 190
 Gly Ile Tyr Ser Leu Gly Arg Val Gln Thr Pro Thr Leu Met Met Ile
 195 200 205
 Cys Ser Arg Tyr Leu Glu Asn Arg Asp Phe Thr Pro Gln Thr Tyr Tyr
 210 215 220
 Arg Leu Lys Val Thr Ala Glu Lys Asp Gly Thr Pro Phe Ala Ala Ile
 225 230 235 240
 Ser Glu Leu Arg Tyr Glu Thr Leu Pro Ala Ala Asn Ala Ala Leu Gly
 245 250 255
 Ala Val Thr Ala Thr Gly Thr Val Glu Val Ala Asp Leu Gln Arg Arg
 260 265 270
 Glu Val Ser Gln Glu Pro Pro Leu Leu Tyr Asp Leu Thr Ala Leu Gln
 275 280 285
 Lys Glu Ala Asn Gly Arg Tyr Gly Phe Ser Ala Asp Lys Thr Leu Ser
 290 295 300
 Ile Ala Gln Ser Leu Tyr Glu Lys Lys Val Leu Ser Tyr Pro Arg Thr
 305 310 315 320
 Gly Ser Arg Tyr Leu Ser Asp Asp Val Phe Asp Glu Ile Pro Asp Arg
 325 330 335
 Ile Ala Leu Leu Glu Arg Tyr Pro Ala Phe Ala Ala His Ala Ala Ala
 340 345 350
 Leu Lys Gly Ala Ser Leu Asn Arg Arg Ser Val Asp Ala Gly Lys Val
 355 360 365
 Thr Asp His His Ala Leu Ile Ile Thr Glu Cys Leu Pro Gly Glu Leu
 370 375 380
 Ser Ala Asp Glu Arg Thr Val Tyr Asp Met Val Ala Ala Arg Leu Leu

6091

385	390	395	400
Glu Ala Phe Ser Ala Arg Cys Leu Lys Asp Ala Thr Thr Val Ser Phe			
405	410	415	
Thr Ala Gly Asn Ser Val Phe Thr Ala Lys Gly Thr Val Val Arg Ser			
420	425	430	
Ala Gly Trp Arg Ala Val Arg Asn Glu Arg Glu Glu Asp Asp Glu Gly			
435	440	445	
Thr Ala Ala Leu Pro Thr Met Gln Thr Asp Glu Ala Phe Pro Leu Gln			
450	455	460	
Ser Ala Glu Cys Val Glu Lys Gln Thr Lys Pro Arg Pro Leu His Thr			
465	470	475	480
Glu Ser Ser Leu Leu Ser Ala Met Glu His Cys Gly Arg Glu Leu Gln			
485	490	495	
Asp Asp Glu Leu Arg Asp Ser Leu Lys Gly Asn Gly Ile Gly Thr Pro			
500	505	510	
Ala Thr Arg Ala Tyr Ile Ile Glu Thr Leu Tyr Ala Arg Asp Tyr Val			
515	520	525	
Arg Pro Glu Lys Lys Glu Leu Val Pro Thr Asp Lys Glu Leu Ala Cys			
530	535	540	
Ile Lys			
545			

<210> 10270

<211> 517

<212> PRT

<213> B.fragilis

<400> 10270

Phe Phe Gln Ile Met Asp Glu Gln Pro Asp Ser Ser Gln Gln Leu Met			
1	5	10	15
Asp Ile Leu Leu Val Met Asp Glu Lys Gly Thr Leu Gln Ala Val Ser			
20	25	30	
Gly Val Lys Asp Gly Glu Leu Gln Thr Lys Asn Pro Leu Glu Asp Asn			
35	40	45	
Asn Asp Leu Leu Arg Val Asp Arg His Gly Asp Met Phe Ser Asn Phe			
50	55	60	
Phe Ser Asn Leu Trp Ser Gln Leu Lys Asp Pro Thr Arg Phe His Phe			
65	70	75	80
Phe Arg Val Pro Glu Glu Gln Val Gln Arg Val Pro Ala Asp Phe Arg			
85	90	95	
Gln Arg Glu Ser Arg Ser Val Lys Thr Gly Glu Pro Leu Leu Ala Gln			
100	105	110	
Tyr Glu Val Gln Pro Pro Val Gln Ala Gln Gln Thr Gln Ala Gly			
115	120	125	
Gln Gln Gln Pro Glu Asp Ala Pro Gln Gln Ser Ala Gly Gln Thr			
130	135	140	
Glu Gln Asn Pro Gln Tyr Lys Tyr Arg Pro Glu Asp Ile Asp Trp Asn			
145	150	155	160
Ser Leu Ala Ala Leu Gly Val Gln Arg Glu Gln Ile Glu Gly Asn Gly			
165	170	175	
Met Leu Asp Gln Met Leu Arg Gly Phe Gln Thr Asp Lys Thr Val Arg			
180	185	190	
Val His Phe His Phe Glu Gly Ile Ser His Ser Asn Asp Ser Gln Leu			
195	200	205	
Ser Leu Lys Pro Gly Thr Asp Gly Arg Leu Thr Val Cys Ser Leu Gly			
210	215	220	
Ile Leu Asp Pro Glu Lys Met Gln Lys Gln Phe Phe Gly Tyr Asp Ile			
225	230	235	240
Thr Asp Ser Asp Lys Gln Val Leu Arg Gln Thr Gly Tyr Met Gly His			

245	250	255
Pro Ala Thr Arg His Gln Pro Gly Gly Arg Ala Gly Arg Ser Pro Cys		
260	265	270
Gln Pro Gln Leu Gln Asp Gln Arg Ala Gly Arg Phe Pro Ala Leu Gln		
275	280	285
Gly Gln Tyr Pro Gly Gly Glu Glu Arg Ala Tyr Leu His Pro Gly Arg		
290	295	300
Asn Ser Pro Ala Gln Thr Gly Arg Gly Gly Leu Pro Val Pro Phe		
305	310	315
Gln Ser Gln Gly Gly Ala Thr Gln Asp Leu Pro Gly Ser Arg Thr		
325	330	335
Val Gln Arg Ser Gln Asp Ala Ala Arg Ile Ser Leu Arg Arg Pro Gly		
340	345	350
Gln Ala Gly Asp Gly Cys Val Gln Asp Glu Pro Glu Thr Asp Arg Gln		
355	360	365
Ser Gly Gly Ala Glu Asp Phe Pro Gln Ala Gly Ala Tyr Arg Glu Val		
370	375	380
Ser Pro Arg Thr Arg Ser Arg Gly Asn Gly Gln Gly Leu Arg Ser Gly		
385	390	395
Gly Gln Glu Arg Lys Ser Leu Pro Arg Leu His His Met Glu Ala Arg		
405	410	415
Arg Glu Ala Arg Leu His Val Ser Gln Gly Leu Gln Gly Gly Thr Arg		
420	425	430
Arg Gly Ala Cys Gln Ala Arg Arg Gly Glu Arg Gly Ala Gly Gly Gly		
435	440	445
Gln Phe Arg Gly Gln Asp Arg Arg Gly Asp Pro Gln Pro Glu Arg Ser		
450	455	460
Pro Ala Ile Arg Thr Ala Ala Pro His Arg Gly Ala Glu Thr Ala Ala		
465	470	475
Gly Ala Gln Ala Gly Ala Glu Arg Gly Thr Glu Thr Val Thr Glu Ala		
485	490	495
Gly Thr Ala Arg Gln Ala Gln Ala Gln Pro Gly Cys Pro Pro Leu Ile		
500	505	510
Ser Pro Ala Thr Leu		
515		

<210> 10271

<211> 165

<212> PRT

<213> B.fragilis

<400> 10271

Lys His Ile Val Met Lys Gln Ile Thr Leu His Val Tyr Gln Ser Ile		
1	5	10
Asp Gly Cys Pro Val Ile Ala Asp Lys Cys Phe Asn Ala Val Val Asp		
20	25	30
Ala Cys Ala Tyr Val Leu Ile Asp Glu Glu Thr Tyr Leu Arg Ile Tyr		
35	40	45
Leu Asn Asp Leu Asp Trp Pro Leu Glu Ala Lys Glu Thr Leu Val Val		
50	55	60
Thr Asn Gly Cys Ile Asp Leu Thr Glu Thr Glu Arg Val Arg Phe Val		
65	70	75
Arg Gly Asn Val Val Thr Glu Leu Gln Arg Ile Lys Glu Asn Gly Asp		
85	90	95
Gly Met Val Val Ala Tyr Gly Gly Glu Thr Gly Val Leu Leu Asp		
100	105	110
Asn Gly Leu Ala Asp Glu Ile Val Met Thr Thr Val Pro Val Leu Val		
115	120	125
Gly Asn Ser Glu Lys Gly Leu Glu Cys Gly Pro Asn Asp Gly Arg Ile		

130	135	140
Trp Ala Val Arg Ser Ser	Glu Val Leu Glu Asp	Gly Lys Ile Arg Thr
145	150	155
Val Tyr Gly Arg Met		160
165		

<210> 10272

<211> 69

<212> PRT

<213> B.fragilis

<400> 10272

His Met Ser Val Val Glu Ser Ile Asn Phe Gln Phe Ala Gln Asn Met			
1	5	10	15
Thr Phe Gln Asn Pro Val Val Glu Asp His Ile Asn Glu Ile Lys Phe			
20	25	30	
Val Thr Asp Lys Asp Ser Phe Leu Ser Gly Phe Glu Thr Glu Ala Val			
35	40	45	
Ser Glu Phe Asp Asn Glu Val Ser Gln Met Val Glu Gln Lys Cys Phe			
50	55	60	
Glu Phe Leu Leu Leu			
65			

<210> 10273

<211> 163

<212> PRT

<213> B.fragilis

<400> 10273

Val Met Asn Thr Leu Thr Ser Gln Ile Glu Gln Leu Gln Ser Leu Ala			
1	5	10	15
His Glu Leu Leu Tyr Leu Gly Val Asp Gly Ala Pro Ile Tyr Thr Asp			
20	25	30	
His Phe Arg Gln Leu Asn Lys Glu Val Leu Glu Gln Ser Asp Ala Leu			
35	40	45	
Tyr Pro Gln Arg Gly Ala Thr Ser Glu Glu Glu Ala Asn Ile Cys Leu			
50	55	60	
Ala Leu Leu Met Gly Tyr Asn Ala Thr Ile Tyr Asn Gln Gly Asp Lys			
65	70	75	80
Glu Glu Lys Lys Gln Val Val Leu Asn Arg Trp Trp Asp Val Leu Asp			
85	90	95	
Gln Thr Ser Gly Thr Leu Leu Lys Cys Gln Leu Val Thr Tyr Cys Tyr			
100	105	110	
Gly Gly Gly Val Glu Glu Glu Leu Gly Lys Glu Gly Pro Ser Phe Ile			
115	120	125	
Lys Lys Val Glu Arg Ile Arg Asn Phe Leu Lys Ile Lys Lys Arg Gln			
130	135	140	
Leu Ile Ile Leu Arg Lys Leu Gly Lys Lys Ile Leu Phe Ser Met Gly			
145	150	155	160
Lys Gly Lys			

<210> 10274

<211> 174

<212> PRT

<213> B.fragilis

<400> 10274

Met Ser Glu Gln Gln Lys Tyr Trp Phe Ala Ala Arg Thr Arg Asp Lys

1	5	10	15												
Gln	Glu	Phe	Ala	Ile	Arg	Asp	Ser	Leu	Glu	Lys	Leu	Lys	Thr	Glu	Leu
				20				25				30			
Asp	Leu	Asn	Tyr	Tyr	Leu	Pro	Thr	Gln	Phe	Val	Ile	Arg	Gln	Leu	Lys
				35				40			45				
Tyr	Arg	Arg	Lys	Arg	Val	Glu	Val	Pro	Val	Ile	Lys	Asn	Leu	Ile	Phe
				50			55			60					
Ile	Gln	Ala	Thr	Lys	Gln	Asp	Ala	Cys	Asp	Ile	Ser	Asn	Lys	Tyr	Asn
				65			70			75			80		
Ile	Gln	Leu	Phe	Phe	Pro	Lys	Asp	Leu	Leu	Thr	Arg	Ala	Met	Leu	Ile
				85			90			95					
Val	Pro	Asp	Lys	Gln	Met	Gln	Asp	Phe	Ile	Phe	Val	Met	Asp	Leu	Asp
				100			105			110					
Pro	Asn	Gly	Val	Ser	Phe	Asp	Asn	Asp	His	Leu	Ser	Val	Gly	Ser	Arg
				115			120			125					
Val	Gln	Val	Val	Lys	Gly	Asp	Phe	Cys	Gly	Val	Glu	Gly	Glu	Leu	Ala
				130			135			140					
Ser	Glu	Ala	Asn	Lys	Thr	Tyr	Val	Val	Ile	Arg	Ile	Ala	Gly	Val	Leu
				145			150			155			160		
Ser	Ala	Ser	Val	Lys	Val	Pro	Lys	Ser	Tyr	Leu	Arg	Val	Ile		
				165			170								

<210> 10275

<211> 122

<212> PRT

<213> B.fragilis

<400> 10275

His	Tyr	Gly	Arg	Lys	Lys	Val	Val	Val	Ile	Ser	Leu	Asn	Asn	Leu	Val
1				5				10				15			
Thr	Ile	Glu	Val	Asn	Gly	Lys	Val	Ile	Phe	Ala	Gly	Lys	Ala	Asp	Leu
				20				25			30				
Gln	Phe	Ser	Leu	Asn	Gln	Lys	Val	Arg	Glu	Pro	Leu	Arg	Ile	Thr	Lys
				35			40			45					
Gly	Lys	Gly	Lys	Leu	Met	Glu	Ala	Leu	Thr	Glu	Ser	Phe	Ile	Lys	Gly
				50			55			60					
Gly	Ile	Asn	Ser	Met	Glu	Asn	Arg	Pro	Ile	Glu	Glu	Leu	Gln	Glu	Thr
				65			70			75			80		
Ile	Lys	Glu	Tyr	Leu	Thr	Phe	Glu	Tyr	Gln	Arg	Lys	Gly	Ile	Ala	Thr
				85			90			95					
Glu	Pro	Asn	Lys	Arg	Ser	Phe	Leu	Ser	Glu	Leu	Lys	Lys	Tyr	Ala	Arg
				100			105			110					
Ala	Phe	Arg	Lys	Lys	Arg	Asp	Glu	Ser	Glu						
				115			120								

<210> 10276

<211> 308

<212> PRT

<213> B.fragilis

<400> 10276

Thr	Ser	Leu	Leu	Leu	Thr	Gln	Lys	Ala	Ile	Leu	Met	Lys	Lys	Thr	Ile
1					5				10			15			
Phe	Leu	Ile	Leu	Cys	Ile	Leu	Cys	Ser	Leu	Gly	Ala	Met	Ala	Gln	Lys
					20				25			30			
Lys	Ser	Ile	Thr	Gly	Val	Val	Thr	Asp	Ala	Ser	Gly	Glu	Ser	Val	Ile
				35			40			45					
Gly	Ala	Ser	Val	Val	Glu	Val	Gly	Thr	Thr	Asn	Gly	Val	Ile	Thr	Asp
				50			55			60					

Ile Ser Gly Lys Phe Thr Leu Met Val Asp Pro Asn Gly Lys Ile Lys
 65 70 75 80
 Val Ser Tyr Val Gly Tyr Gln Pro Gln Val Leu Asp Val Lys Gly Lys
 85 90 95
 Asn Ser Phe Asn Ile Lys Leu Lys Glu Asp Ser Glu Met Leu Asp Glu
 100 105 110
 Val Val Val Thr Gly Tyr Gly Lys Gln Leu Arg Thr Lys Val Thr
 115 120 125
 Asn Ser Ile Gly Lys Val Lys Glu Asp Val Leu Gln Lys Gly Leu Phe
 130 135 140
 Ser Asn Pro Ala Gln Ala Leu Ser Gly Ala Val Ser Gly Val Arg Val
 145 150 155 160
 Leu Gln Thr Ser Gly Asp Pro Gly Ala Thr Pro Thr Ile Ile Leu Arg
 165 170 175
 Gly Gly Thr Asp Tyr Asn Gly Thr Gly Ser Pro Leu Val Leu Val Asp
 180 185 190
 Gly Gln Val Arg Gly Ser Leu Ser Asp Ile Asn Pro Glu Asp Ile Glu
 195 200 205
 Ser Met Glu Val Leu Lys Asp Ala Gly Ala Thr Ala Ile Tyr Gly Ala
 210 215 220
 Arg Ala Asn Asn Gly Val Ile Leu Val Thr Thr Lys Arg Gly Lys Glu
 225 230 235 240
 Gly Lys Gly Glu Val Ser Val Lys Ala Lys Val Gly Ile Asn Tyr Tyr
 245 250 255
 Asn Asn Pro Tyr Glu Phe Met Asn Ala Arg Asp Tyr Ile Tyr Trp Met
 260 265 270
 Arg Thr Ala Tyr Gln Arg Ser Gly Gln Ile Tyr Lys Asp Ser Lys Gly
 275 280 285
 Asn Trp Val Gly Thr Ala Asp Met Asn Ser Leu Asn Asn Ala Thr Ser
 290 295 300
 Leu Trp Tyr Gly
 305

<210> 10277

<211> 268

<212> PRT

<213> B.fragilis

<400> 10277

Asn Ser Asn Lys Leu Val His Pro Asp Val His Phe Val Phe Pro Val
 1 5 10 15
 Val Lys Asn Gly Arg Ser Asp Asp Tyr Ile Val Glu Trp Arg Lys Leu
 20 25 30
 Val Leu Asn Asn Pro Tyr Phe Thr Ile Asn His Trp Leu Asn Glu Ile
 35 40 45
 Asn Ala Glu Asn Ala Gln Ala Val Ile Tyr Thr Lys Glu Ser Asp Glu
 50 55 60
 Ile Met Lys Lys Leu Ser Leu Lys Ser Ser Glu Gly Phe Lys Ile
 65 70 75 80
 Thr Leu Leu Trp Leu Pro Glu Lys Met Gln Gln Ala Cys Ala Asn Lys
 85 90 95
 Leu Leu Lys Leu Leu Glu Glu Pro Pro Glu Lys Thr Ile Phe Leu Leu
 100 105 110
 Val Ser Glu Ala Pro Asp Leu Ile Leu Gln Thr Ile Leu Ser Arg Thr
 115 120 125
 Gln Arg Phe Asn Leu Arg Lys Ile Glu Glu Glu Cys Met Ala Glu Ala
 130 135 140
 Leu Gln Ser Lys Tyr Gly Val Gln Gln Ala Thr Ser Ile Ser Ile Ala
 145 150 155 160

His Leu Ala Asn Gly Asn Phe Ile Lys Ala Leu Glu Thr Ile His Leu
 165 170 175
 Asn Glu Glu Asn Gln Leu Phe Phe Glu Leu Phe Val Ser Leu Met Arg
 180 185 190
 Leu Ser Tyr Gln Arg Lys Ile Arg Glu Met Lys Leu Trp Ser Glu Gln
 195 200 205
 Val Ala Gly Met Gly Arg Glu Arg Gln Lys Asn Phe Leu Glu Tyr Cys
 210 215 220
 His Lys Glu Arg Phe Lys Ser Leu Pro Gly Arg Pro Val Asn Asp Phe
 225 230 235 240
 Arg Asn Tyr Met Thr Leu Glu Glu Gln Asn Phe Ala Thr Arg Phe Ala
 245 250 255
 Val Phe Thr Thr Gly Leu Gly Ser Thr Leu Val
 260 265

<210> 10278

<211> 73

<212> PRT

<213> B.fragilis

<400> 10278

Leu Lys Ile Ala Ile Lys Ser Ile Lys Val Cys Ser Phe Val Tyr Ser
 1 5 10 15
 Phe Arg Arg Lys Leu Asn Arg Arg Lys Ile Arg Gln Phe Ser Leu Ala
 20 25 30
 Ala Gln Tyr Leu Lys Ile Gly Asn Met Pro Ile Met Leu Tyr Tyr Pro
 35 40 45
 Phe Gln Lys Gly Leu Ile Ile His Ala Arg Asn Gly Asn Ser Tyr His
 50 55 60
 Gly Thr Lys Ser Val Ala Tyr Phe Ile
 65 70

<210> 10279

<211> 559

<212> PRT

<213> B.fragilis

<400> 10279

Ile Met Lys Ala Lys Lys Tyr Asn Trp Thr Leu Arg His Ser Phe Leu
 1 5 10 15
 Leu Phe Leu Val Ile Phe Ile Ser Ser Ser Cys Val Glu Asp Val Thr
 20 25 30
 Glu Ser Thr Lys Glu Pro Thr Arg Tyr Thr Ala Asn Asp Ile Lys Ser
 35 40 45
 Tyr Ser Asp Leu Phe Asp Val Phe Trp Asn Thr Met Asn Gln Lys Tyr
 50 55 60
 Asn Tyr Phe Tyr Glu Gln Ser Ser Phe Asn Trp Glu Thr Val Tyr Asn
 65 70 75 80
 Glu Tyr Ala Pro Lys Phe Lys Lys Leu Lys Thr Phe Asn Arg Asp Lys
 85 90 95
 Gln Tyr Ser Lys Ala Glu Ile Ser Glu Asp Cys Asn Lys Ala Ile Glu
 100 105 110
 Tyr Phe Thr Glu Ile Ile Asp Pro Ile Ile Asp Arg His Phe Tyr Val
 115 120 125
 Lys Ile Ser Leu Pro Val Ser His Ser Phe Ile Arg Asn Val Tyr Phe
 130 135 140
 His Gly Gly Met Lys Ser Lys Glu Lys Ile Tyr Thr Tyr Pro Phe Glu
 145 150 155 160
 Leu Lys Tyr Glu Tyr Met Arg Ser Lys Ile Gln Ser Glu Thr Gly Val

	165		170		175										
Phe	Gly	Gln	Ala	Asn	Asp	Met	Leu	Gly	Gly	Phe	Leu	Ser	Asp	Asn	Pro
						180			185					190	
Asp	Ile	Tyr	Tyr	Phe	Ser	Phe	Lys	Ser	Phe	Thr	Ile	Ser	Asn	His	Tyr
						195			200					205	
Ile	Leu	Ser	Phe	Gly	Ser	Glu	Tyr	Leu	Val	Ile	Asp	Asp	Lys	Ser	Pro
						210			215					220	
Tyr	Tyr	Leu	Thr	Glu	Lys	Glu	Ile	Arg	Asp	Thr	Val	Glu	Ala	Asn	Lys
						225			230					240	
Ile	Lys	Asp	Pro	Ala	Val	Lys	Ser	Ala	Leu	Ile	Glu	Lys	Ser	Ile	Glu
						245					250				255
Tyr	Met	Asn	Lys	Phe	Asn	Ser	Phe	Met	Arg	Ser	Glu	Ile	Ala	Gln	Asp
						260			265					270	
Ala	Ile	Lys	Lys	Ile	Ala	Asp	Phe	Asn	Gln	Ser	Glu	Asn	Pro	Asp	Asn
						275			280					285	
Ser	Phe	Ile	Glu	Ala	Leu	Ser	Lys	Ala	Lys	Glu	Asn	Ala	Pro	Asp	Ile
						290			295					300	
Asn	Ile	Glu	Leu	Ser	Gln	Leu	Ser	Gly	Leu	Lys	Glu	Phe	Arg	Leu	Asn
						305			310					315	
Pro	Asn	Tyr	Thr	Trp	Phe	Lys	Gln	Arg	Ser	Thr	Glu	His	Leu	Gln	
						325					330				335
Leu	Ala	Cys	Glu	Tyr	Thr	Val	Phe	Leu	Ser	Asn	Ile	Asp	Asn	Val	Ile
						340					345				350
Asn	Asn	Gln	Tyr	Lys	Ile	Asp	Phe	Tyr	Arg	Asn	Phe	Leu	Val	Pro	Leu
						355			360					365	
Lys	Val	Gly	Lys	Ile	Lys	Lys	Ile	Ile	Leu	Asp	Leu	Arg	Gly	Asn	Gly
						370			375					380	
Gly	Gly	Met	Val	Leu	Asp	Ala	Arg	Thr	Phe	Thr	Asp	Arg	Phe	Ile	Thr
						385			390					395	
Lys	Asp	Ala	Ile	Phe	Gly	Tyr	Gln	Arg	Phe	Lys	Glu	Asp	Asn	Asn	Pro
						405					410				415
Phe	Ser	Tyr	Thr	Pro	Trp	Thr	Pro	Cys	Met	Thr	Lys	Thr	Thr	Gly	Ile
						420					425				430
Gly	Ile	Lys	Lys	Glu	Ile	Pro	Ile	Val	Ile	Leu	Leu	Asp	Asn	Asn	Ser
						435					440				445
Ala	Ser	Met	Ser	Glu	Ile	Ser	Thr	Leu	Met	Leu	Lys	Ser	Gln	Gly	Lys
						450					455				460
His	Val	Thr	Val	Val	Gly	Gly	Tyr	Ser	Ala	Gly	Ala	Thr	Ala	Gly	Leu
						465			470					475	
Gly	Asp	Ser	Asp	Gln	Phe	Asn	Gly	Gly	Ile	Arg	Gly	Lys	Val	Ser	Asp
						485					490				495
Tyr	Leu	Glu	Phe	Tyr	Met	Pro	Leu	Leu	Ala	Met	Gln	Asp	Ala	Thr	His
						500					505				510
Thr	Val	Ile	Glu	Gly	Ile	Gly	Ile	Lys	Pro	Asp	Leu	Leu	Val	Asp	Pro
						515					520				525
Leu	Thr	Glu	Asp	Glu	Val	Arg	Glu	Met	Ala	Leu	Ser	Pro	Phe	Thr	His
						530					535				540
Ile	Asp	Arg	Thr	Leu	Lys	Gln	Ala	Ile	Glu	Val	Leu	Ser	Asn	Asn	
						545					550				555

<210> 10280

<211> 171

<212> PRT

<213> *B. fragilis*

<400> 10280

Cys	Phe	Asn	Phe	Met	Lys	Lys	Gly	Ile	Leu	Phe	Ile	Ala	Leu	Phe	Ala
1					5				10					15	
Ala	Ser	Phe	Gly	Phe	Met	Gln	Ser	Ser	Phe	Ala	Ala	Pro	Ser	Met	Ser

20	25	30	
Ala Asn Ser Ile Thr Asn Val	Leu Ala Ile Ser Asp	Tyr Glu Gly Thr	
35	40	45	
Tyr Ser Gly Thr Met Asp Asn	Ile Ile Met Arg	Gly Lys Pro Tyr Glu	
50	55	60	
Ser Arg Ala Ala Thr Tyr	Lys Ile Glu Gly	Gly Arg Leu Lys Cys Asp	
65	70	75	80
Phe Pro Gln Ile Gly Ser Met	Pro Gly Thr Ile	Thr Ile Ser Leu Ala	
85	90	95	
Val Glu Val Asp Glu Glu	Thr Gly Glu	Ile Thr Ala Tyr Asn Gly Asp	
100	105	110	
Glu Ala Gly Thr Leu Ser	Leu Pro Leu Gly	Ile Lys Val Lys Leu Tyr	
115	120	125	
Leu Asp Asp Leu Arg Asp	Ala Lys Ile Thr Asp	Asn Gly Ser Ser Lys	
130	135	140	
Gln Ile Glu Phe Thr Leu Asp	Val Ser Gly	Thr Phe Leu Gly Ala Asn	
145	150	155	160
Phe Pro Ala Ser Val His	Phe Val Gly	Thr Lys	
165	170		

<210> 10281

<211> 84

<212> PRT

<213> B.fragilis

<400> 10281

Thr Leu Lys Lys Arg Pro Met Arg	Lys Leu Lys Lys Pro	Tyr Ser Gln	
1	5	10	15
Asn Trp Arg Gly Leu Ser Ala Lys	Trp Leu Phe Ile	Leu Ser Thr Val	
20	25	30	
Leu Gly Ile Ile Ala Gly Thr Cys	Phe Trp Ile Phe	Ile Ser Arg Cys	
35	40	45	
Gly Asn Glu Glu Cys Phe Leu Asn	Tyr Asp Pro Leu Pro	Glu Met Phe	
50	55	60	
Ile Gly Gly Val Ile Gly Ala Phe	Leu Tyr Val Ile	Ile Trp Gly Met	
65	70	75	80
Thr Ser Asp Met			

<210> 10282

<211> 498

<212> PRT

<213> B.fragilis

<400> 10282

Arg Arg Met Lys Arg Val Thr	Thr Ile Leu Phe	Leu Met Leu Ile	
1	5	10	15
Cys Val His Thr Ala Ala Gln	Gln Lys Val Lys	Leu Glu Val Leu Glu	
20	25	30	
Lys Gly Thr Glu Gln Pro Ile	Ile Ala Ala Asn	Val Ile Tyr Ala Asp	
35	40	45	
Asn Glu Ala Leu Arg Asn Pro	Gln Tyr Ala Ile	Thr Asn Thr Ser Gly	
50	55	60	
Gln Ala Glu Leu Lys Leu Pro	Ser Lys Gly Ile	Cys Tyr Tyr Lys Val	
65	70	75	80
Thr Tyr Ile Gly Tyr Val Pro	Val Thr Gly Lys	Ile Gly Gly Thr Gln	
85	90	95	
Asp Glu Lys Val Ile Tyr Met	Lys Glu Asp Asp	Leu Gly Ile Asn Glu	
100	105	110	

Val Val Val Thr Gly Ser Arg Thr Ala Arg Pro Ile Lys Met Ser Pro
 115 120 125
 Val Thr Thr Gln Val Leu Gly Gly Lys Ala Leu Val Asp Ala Gly Tyr
 130 135 140
 Ser Asn Leu Gln Gln Ala Leu Gln Glu Thr Pro Gly Leu Asn Ile
 145 150 155 160
 Gln Lys Val Gly Phe Gly Asn Glu Ile Ser Met Gln Gly Leu Asp Ala
 165 170 175
 Arg His Val Leu Phe Leu Met Asp Gly Glu Arg Met Thr Gly Asp Met
 180 185 190
 Ala Gly Asn Leu Asp Tyr Glu Arg Phe Asn Leu His Ala Ile Asp Arg
 195 200 205
 Val Glu Ile Val Lys Gly Ala Ser Ser Thr Leu Tyr Gly Ser Arg Ala
 210 215 220
 Ala Gly Ala Val Ile Asn Leu Ile Thr Lys Lys Thr Asp Lys Pro Leu
 225 230 235 240
 Ser Ile Asp Ala Gly Ile Arg Tyr Gly Gln Met Asn Glu Arg Asn Tyr
 245 250 255
 Lys His Pro Gln Pro Lys Asp Phe Leu Tyr Met Phe Glu Gln Asn Ala
 260 265 270
 Asp Arg Pro Asn Leu Gln Ser Trp Val Ser Ala Gly Phe Lys Ala Gly
 275 280 285
 Lys Phe Thr Ser Gln Thr Asp Val Trp Tyr Ser Glu Ser Asp Ala Phe
 290 295 300
 Tyr Met Tyr Gln Ala Glu Asn Asp Lys Lys Val Tyr Thr Lys Glu Ala
 305 310 315 320
 Asn Pro Phe Leu Pro His Asp Ile Thr Val Val Ser Asn Ala Val Arg
 325 330 335
 Pro Pro Met Gly Ile Glu Gly Lys Glu His Ile Thr Val Ser Gln Lys
 340 345 350
 Leu Tyr Tyr Asn Pro Asn Pro Asn Leu Ser Val Leu Val Tyr Gly Ser
 355 360 365
 Ser Phe Phe Met Asn Thr Tyr Asp Leu Ile Gln Asp Met Met Phe Ser
 370 375 380
 Gln Ala Arg Asp Leu Thr Ala Gly Thr Lys Val Thr Tyr His Val Lys
 385 390 395 400
 Asp Trp Phe Ser Val Thr Gly Ser Leu His Ala Asp Phe Tyr Asp Arg
 405 410 415
 Phe Lys Arg His Glu Arg Ile Asp Lys Arg Gln Lys Asp Tyr Glu Ser
 420 425 430
 Ser Ile Tyr Gln Pro Arg Leu Thr Val Thr Ser Asn Tyr Phe Asn Gly
 435 440 445
 His Ser Leu Ile Leu Gly Met Glu His Thr Ser Asp Glu Leu Thr Ser
 450 455 460
 Asp Arg Phe Ser Gly Asn Ala Asn His Asp Leu Lys Thr Arg Ala Leu
 465 470 475 480
 Lys Glu Thr Glu Tyr Phe Leu Ser Ser Leu Met Ala Glu Arg Pro Ser
 485 490 495
 Phe Pro

<210> 10283

<211> 60

<212> PRT

<213> B.fragilis

<400> 10283

Arg Pro Phe Asp Lys Leu Glu Arg Leu Ser Ser Ser Pro Val Val Lys
 1 5 10 15

Thr Val Asp Gln Glu Asn Ile Asp Ser Ile Leu Phe Cys Ile Glu Glu
 20 25 30
 Asn Asn Ser Thr Leu Lys Ala Leu Arg Glu Glu Thr Asn Ala Gln Lys
 35 40 45
 Leu Gly Asn Lys Thr Gly Ile Tyr Ser Val Arg Pro
 50 55 60

<210> 10284

<211> 65

<212> PRT

<213> B.fragilis

<400> 10284

Phe Ile Tyr Cys Asn Pro Ile Gly Glu Val Trp Gly Thr Cys Phe Asn
 1 5 10 15
 Pro Ala Ala Leu Leu Leu Leu Thr Ser Phe Ser Ser Ile Val Val Cys
 20 25 30
 Ser Met Phe Tyr Phe Leu Gln Val Ser Val Glu Glu Thr Asn Lys
 35 40 45
 Arg Lys Ser Phe Ile Asn Tyr Ile Lys Arg Lys Leu Lys Cys Ile Ile
 50 55 60

Lys

65

<210> 10285

<211> 931

<212> PRT

<213> B.fragilis

<400> 10285

Phe Cys Val Cys Leu Val Phe Phe Gly Met Asn Ile Arg Met Asn Ile
 1 5 10 15
 Leu Leu Cys Phe Leu Trp Leu Phe Ser Ala Thr Leu Ser Ala Gln Gln
 20 25 30
 Val Lys Ile Val Lys Gly His Val Cys Val Leu Ser Glu Asp Ser Ile
 35 40 45
 Glu Arg Ser Leu Pro Tyr Ala Ser Val Val Leu Glu Gly Lys Asp
 50 55 60
 Ser Ala Phe Val Lys Gly Met Ala Ser Asp Ala Asn Gly Ser Phe Lys
 65 70 75 80
 Leu Glu Phe Ile Pro Gln Lys Arg Met Glu Tyr Leu Leu Arg Ile Ser
 85 90 95
 Tyr Ile Gly Met Ser Thr Ile Phe Arg Lys Leu Asp Pro His Met Met
 100 105 110
 Asp Ile Asp Cys Gly His Ile Leu Met Glu Ser Gly Ile Lys Leu Ala
 115 120 125
 Glu Val Leu Val Thr Ala Pro Val Lys Glu Ile Asp Met Ala Gly Asp
 130 135 140
 Thr Thr Val Ile Asn Ala Asp Ala Tyr Arg Thr Pro Glu Gly Ser Asn
 145 150 155 160
 Leu Glu Glu Leu Val Arg Lys Ile Pro Gly Leu Glu Tyr Asp Asp Arg
 165 170 175
 Ser Lys Ser Leu Ser Tyr Asn Gly Leu Val Ile Ser Glu Ile Asn Val
 180 185 190
 Asn Gly Glu Ala Phe Phe Ser Gly Asn His Val Leu Ala Leu Glu Asn
 195 200 205
 Leu Pro Ala Asp Leu Ile Ser Arg Ile Lys Val Tyr Asp Lys Arg Ser
 210 215 220
 Glu Met Glu Lys Phe Thr Gly Val Arg Thr Val Asp Glu Asn Tyr Val

225	230	235	240
Leu	Asp	Leu	Gln
Thr	Lys	Lys	Glu
Leu	Asn	Gly	Thr
245	250	255	
Val	Ala	Val	Gly
Gly	Lys	Gly	Asn
Lys	Lys	Lys	Glu
260	265	270	
Ser	Asn	Phe	Phe
Lys	Ala	Asp	Gly
Glu	Asn	Leu	Ser
275	280	285	
Ser	Gly	Asn	Arg
Arg	Asp	Ile	Thr
290	295	300	
Asn	Ile	Ala	Val
Asn	Phe	Lys	Lys
295	300	305	
Asn	Ile	Asn	Phe
305	310	315	
Asn	Gly	Asn	Ile
Asn	Ile	Met	Tyr
325	330	335	
Ser	Tyr	Tyr	Glu
Gln	Tyr	Leu	Met
340	345	350	
Thr	Asp	Asn	Gly
Tyr	His	Thr	Asn
355	360	365	
Ala	Arg	Trp	Asn
Ile	Asp	Lys	Lys
370	375	380	
Phe	Asn	Ala	Leu
Lys	Gly	Ile	Asn
385	390	395	
Tyr	Asn	Ala	Asp
Pro	Lys	Leu	Asp
405	410	415	
Ala	Ser	Glu	Gln
Ile	Glu	Asp	Ser
420	425	430	
Thr	Ser	Arg	Ser
Ser	Ile	Asn	Arg
435	440	445	
Ile	Thr	Arg	Arg
Leu	Asn	Ala	Lys
450	455	460	
Gln	Tyr	Ser	Glu
Glu	Arg	Gly	Asn
465	470	475	
Thr	Thr	Tyr	Gln
Leu	Gln	Asn	Val
485	490	495	
Tyr	Arg	Asn	Gln
Tyr	Gln	Glu	Ser
500	505	510	
Leu	Gly	Ile	Leu
Thr	Gln	Ile	Leu
515	520	525	
Leu	Ser	Tyr	Ile
Phe	Lys	Leu	Asp
530	535	540	
Tyr	Val	Leu	Ser
Pro	Val	Val	Asp
545	550	555	
Asn	Phe	Pro	Lys
Gly	Tyr	Glu	Val
565	570	575	
Lys	Ser	Arg	Ser
His	Thr	Met	Ala
580	585	590	
Tyr	Thr	Asp	Lys
Thr	Trp	Glu	Ile
595	600	605	
Lys	Arg	Gln	Thr
Leu	Gly	Gln	Lys
610	615	620	
Leu	Arg	Tyr	Ser
Val	Asn	Tyr	His
625	630	635	
Lys	Arg	Lys	Thr
Trp	Val	Gln	Leu
645	650	655	
Pro	Gly	Leu	Ala
Glu	Leu	Leu	Thr
660	665	670	
Asn	Ile	Ile	Arg
Gly	Asn	Pro	Asp
675	680	685	
Val	Arg	Leu	Glu
690	695	700	

Asn Trp Thr Ser Met Leu Asn Asn Val Thr Arg Ala Val Ile Tyr Asp
 705 710 715 720
 Ser Gln Thr Gly Gly Ile Glu Ser Arg Pro Val Asn Val Asn Gly Asn
 725 730 735
 Trp Asn Ile Lys Ala Ala Met Arg Tyr Gln Lys Arg Ile Asn His Tyr
 740 745 750
 Phe Asn Leu Ser Ala Arg Thr Gly Thr Ser Phe Ile Gln Ser Val Ser
 755 760 765
 Leu Val Asn Asp Gly Gln Arg Glu Gln Pro Glu Arg Ser Val Thr His
 770 775 780
 Asn Arg Leu Tyr Asn Ala Gly Leu Arg Val Gly Tyr Gln Pro Lys Trp
 785 790 795 800
 Gly Gly Phe Asp Leu Ser Gly Asp Trp Arg Phe Arg His Ser Thr Asn
 805 810 815
 Leu Leu Arg Glu Thr Asn Asn Tyr Ile Arg Asp Tyr Ser Phe Gly Leu
 820 825 830
 Thr Ala Tyr Ala Val Phe Pro Gly Asn Ile Arg Leu Lys Ser Glu Thr
 835 840 845
 Thr His Thr Phe Arg Asn Gly Thr Asn Ile Asn Arg Ser Glu Asp Asn
 850 855 860
 Glu Val Val Trp Asn Leu His Leu Ser Trp Ser Phe Leu Lys Tyr Lys
 865 870 875 880
 Lys Ala Glu Phe Ser Val Tyr Trp Ala Asp Ile Leu Ser Gln Lys Lys
 885 890 895
 Ser Tyr Ser Arg Asn Val Thr Ser His Gly Leu Ser Glu Arg Tyr Thr
 900 905 910
 Gln Gln Ile Gly Ser Tyr Phe Ile Val Ser Phe Lys Tyr Arg Phe Asn
 915 920 925
 Arg Gln Leu
 930

<210> 10286

<211> 278

<212> PRT

<213> B.fragilis

<400> 10286

Ile Asn Leu Leu Leu Glu Ala Lys Gln Tyr Cys Ile Asp Leu Val Tyr
 1 5 10 15
 Tyr Asn Gly Leu Lys Lys Glu Leu Lys Val Arg Leu Arg His Ala Gln
 20 25 30
 Ala Ile Ala Asp Ala Tyr Arg Gln Arg Leu Asp Arg Gly Asp Ala Ser
 35 40 45
 Ile Leu Glu Tyr Asn Lys Val Gln Leu Asn Leu Ser Thr Val Gln Gly
 50 55 60
 Glu Met Ser Arg Ile Glu Val Glu Arg Asn Ala Leu Leu Ser Glu Leu
 65 70 75 80
 Lys Arg Leu Asn Gly Gly Met Asp Val Ile Phe Glu Ala Ser Asn Tyr
 85 90 95
 Ser Pro Ala Ser Leu Pro Val Asn Phe Glu Asp Trp Tyr Leu Ser Ala
 100 105 110
 Gln Gln Lys Asn Pro Leu Leu Gln Tyr Val Lys Gln Gln Ile Glu Val
 115 120 125
 Ser Lys Glu Gln Val Lys Leu Gly Lys Ala Met Thr Leu Pro Lys Phe
 130 135 140
 Ser Ala Gly Tyr Ser Leu Glu Arg Thr Leu Gly Gln Lys Tyr Gln Gly
 145 150 155 160
 Ile Ser Val Gly Ile Ser Ile Pro Leu Trp Glu Asn Lys Asn Arg Val
 165 170 175

Lys Gln Ala Lys Ala Gly Val Val Ala Ala Gln Ala Arg Glu Gln Asp
 180 185 190
 Ser Lys Gln Gln Phe Tyr Asp Arg Leu Arg Asn Leu Tyr Met Arg Ala
 195 200 205
 Ser Gly Leu Gln Gln Thr Ala Ile Ala Tyr Arg Glu Ser Leu Lys Ala
 210 215 220
 Leu Asn Asn Thr Ala Leu Leu Met Lys Ala Leu Asp Val Gly Glu Ile
 225 230 235 240
 Ser Leu Leu Asn Tyr Ile Val Glu Ile Gly Leu Tyr Tyr Asp Thr Val
 245 250 255
 Asn Gln Thr Leu Ala Ala Glu Arg Asp Phe Glu Lys Ala Leu Ala Asp
 260 265 270
 Leu Ser Ala Val Glu Leu
 275

<210> 10287

<211> 249

<212> PRT

<213> B.fragilis

<400> 10287

Gln Thr Ile Gly Ser Met Phe Asn Leu Asn Ile Asn Phe Met Lys Lys
 1 5 10 15
 Gln Leu Val Ile Phe Ile Leu Leu Gly Ile Ile Ala Ile Pro Ser Ser
 20 25 30
 Val Lys Ala Gln Lys Leu Lys Val Ser Leu Ser Ala Gly Leu Ser Lys
 35 40 45
 Ser Ile Leu Asn Ser Asp Val Ser Asn Leu Val Asn Thr Arg Tyr Asp
 50 55 60
 Thr Lys Thr Gly Val Ala Thr Arg Val Asn Leu Glu Tyr Asn Phe Phe
 65 70 75 80
 Lys Asp Phe Ile Val Gly Thr Gly Leu Gly Phe Ile Gln Lys Asn Tyr
 85 90 95
 Glu Tyr Lys Lys Thr Asp Asn Ile Thr Gly Thr His Thr Leu Tyr Lys
 100 105 110
 Asn Asn Phe Met Asp Ile Pro Leu Asn Val Gly Leu Tyr Leu Phe Asn
 115 120 125
 Asn Pro His Lys Glu Asn Gly Ile Trp Leu Lys Val Gln Gly Gly Val
 130 135 140
 Phe Tyr Glu Tyr Phe Thr Arg Met His Arg Lys Gly Glu Tyr Pro Ile
 145 150 155 160
 Phe Ala Gln Leu Gln Glu Asp Gly Ser Tyr Ile Lys Ala Gln Val Asn
 165 170 175
 Glu Thr Tyr Asp Phe Lys Arg Asn Glu Asn Asn Leu Lys Arg Asn Leu
 180 185 190
 Phe Gly Ile Glu Gly Thr Gly Glu Val Gly Tyr Ser Phe Asn Arg Ile
 195 200 205
 Asp Val Phe Ala Ser Tyr Thr Tyr Gln Tyr Gly Leu Thr Asp Ile Tyr
 210 215 220
 Lys Ala Lys Thr Ser Ser Asn Arg Lys Ser Lys Arg Ile Ser Asn Ile
 225 230 235 240
 Ile Ser Leu Gly Val Ala Tyr Lys Phe
 245

<210> 10288

<211> 228

<212> PRT

<213> B.fragilis

<400> 10288

Lys Lys Ile Ile Tyr Lys Leu Tyr Lys Lys Lys Thr Glu Met Tyr Asn
 1 5 10 15
 Lys Ile Arg Phe Asp Thr Phe Met Leu Met Cys Phe Phe Met Ile Thr
 20 25 30
 Ile Leu Gly Leu Ser Ala Cys Asp Ser Asp Glu Lys Ile Thr Gln Glu
 35 40 45
 Pro Pro Ser Gln Thr Tyr Val Lys Lys Ala Lys Glu Ile Leu Ala Gly
 50 55 60
 Asp Ile Val Leu Ser Thr Arg Ala Thr Met Asn Gly Val Asp Lys Thr
 65 70 75 80
 Leu Leu Lys Ser Gly Cys Pro Thr Lys Phe Asn Phe Ser Trp Arg Glu
 85 90 95
 Asp Gly Met Met Ile Leu Asn Leu Ser Asp Phe Ser Val Gly Ala Met
 100 105 110
 Pro Phe Ala Ile Ser Phe Lys Cys Ala Thr Lys Ile Met Gln Leu Asn
 115 120 125
 Ser Trp Glu Gln Asp Glu Tyr Pro Gly Asp Gly Trp Ile Lys Phe Val
 130 135 140
 Gly Thr Asp Gly Asn Val Thr Thr Ser Gly Asp Asp Ala Glu Asp Asn
 145 150 155 160
 Gln Glu Gly Ser Gly Ala Arg Val Asp Gly Tyr Leu Asn Val Asn Thr
 165 170 175
 Asn Gln Ile Glu Phe Ile Val Asp Tyr Asn Met Met Asn Val Arg Thr
 180 185 190
 Glu Thr Phe Leu Gln Thr Ile Asp Lys Thr Arg Ile Asp Arg Phe Lys
 195 200 205
 Glu Glu Phe Ala Gln Tyr Glu Lys Asp Leu Glu Ala Lys Lys Asp
 210 215 220
 Gln Gly Lys Ala
 225

<210> 10289

<211> 475
 <212> PRT
 <213> B.fragilis

<400> 10289

Cys Asn Glu Met Asn Asn Leu Arg Asn Tyr Leu Gly Leu Ser Ala Leu
 1 5 10 15
 Thr Met Gly Leu Cys Leu Met Ser Cys Asn Asp Asp Asn Thr Pro Ser
 20 25 30
 Tyr Ser Gln Thr Met Lys Asn Ser Glu Leu Lys Thr Ile Leu Gln
 35 40 45
 Gln Lys Gly Tyr Gln Phe Asn Glu Gln Gly Asn Leu Leu Leu Asp Asp
 50 55 60
 Leu Ala Asn Asn Thr Thr Leu Asp Leu Ser Gly Thr Lys Leu Ser
 65 70 75 80
 Asn Leu Ser Glu Leu Asp Ile Leu Pro Asn Leu Thr Glu Val Lys Leu
 85 90 95
 Ser Asp Asn Asp Tyr Gly Pro Val Phe Asp Phe Ser Lys Leu Pro Lys
 100 105 110
 Gln Ile Thr Gly Ile Asp Leu Thr Gly Asn Asp Ile Tyr Asp Tyr Asp
 115 120 125
 Asn Leu Val Asn Val Val Val Glu Glu Asn Gly Asn Glu Thr Val Thr
 130 135 140
 Asn Leu His Asp Ile Thr Lys Leu Tyr Leu Pro Arg Thr Ala Lys Asp
 145 150 155 160
 Asn Ile Lys Asp Leu Val Arg Phe Tyr Ile Lys Asn Lys Asp Ala Ile

165	170	175	
Thr Asn Gly Lys Ile Asp Met Lys Ile Lys Asp Glu Ser Gly	Thr Leu		
180	185	190	
Gln Thr Tyr Thr Leu Arg Glu Val Pro Asp Glu Asn Leu Arg Thr			
195	200	205	
Tyr Leu Gln Ala Asn Phe Ser Asp Leu Phe Asn Gly Asp Gln Ile Asp			
210	215	220	
Leu Ser Lys His Leu Gly Tyr Ala Gln Lys Thr Thr Ile Leu Leu Ile			
225	230	235	240
Gln Ala Asn Ala Gly Val Thr Asn Phe Glu Gly Ile Gln Tyr Ile Ile			
245	250	255	
Gln Asn Pro Tyr Trp Glu Gly Ala Ala Val Ala Leu Tyr Ser Ala Ala			
260	265	270	
Gln Ser Gly Ala Asn Met Pro Ser Val Lys Leu Gly Lys Tyr Val Thr			
275	280	285	
Asn Leu Val Leu Asn Asn Leu Asn Val Arg Ser Leu Asp Leu Ser Asn			
290	295	300	
Ala Gly Ser Leu Phe Val Leu Asn Ile Gly Thr Val Ala Gly Leu Ser			
305	310	315	320
Thr Leu Asp Leu Thr His Thr Ile Trp Gly Gln Arg Glu Lys Glu Ile			
325	330	335	
Glu Ala Glu Glu Ser Lys Gly Ser Tyr Leu Ile Val Tyr Asp Cys Pro			
340	345	350	
Ser Leu Lys Glu Ile Lys Leu Pro Lys Lys Asp Glu Leu Lys Thr Cys			
355	360	365	
Phe Leu Asp Leu Glu Cys Leu Asp Ala Leu Glu Thr Phe Asp Ile Ser			
370	375	380	
Asn Leu Lys Met Val Lys Asn Leu Ile Phe Gly Asn Leu Pro Glu Asn			
385	390	395	400
Phe Asn Leu Val Tyr Pro Glu Leu Thr Val Phe Tyr Ser Pro Glu Gly			
405	410	415	
Arg Ser Ala Thr Ser Phe Cys Cys Ser Glu Ser Thr Phe Asn Arg Glu			
420	425	430	
Ser Thr Lys Thr Phe Leu Asp Arg Tyr Tyr Thr Lys Gly Thr Gly Val			
435	440	445	
Glu Lys Leu Gly Phe Ser Ile Ser Met Ser Cys Asn Lys Asn Asp Gly			
450	455	460	
Tyr Asn Trp Arg Lys Ala Leu Lys Lys Lys Ser			
465	470	475	

<210> 10290

<211> 77

<212> PRT

<213> B.fragilis

<400> 10290

Arg Gln Ser Ser His Gly Tyr Asn Ala Phe Tyr Arg Thr Arg His Leu			
1	5	10	15
Asp Gly Ile Pro Phe Asn Lys Ser Phe Lys Phe Asp Ile Glu Met Leu			
20	25	30	
Gly Trp Lys Arg Gly Glu Ala Asp Tyr Ala Thr Thr Ile Tyr Trp Tyr			
35	40	45	
Gly Asp Pro Glu Ala Gln Val Phe Gly Thr Ser Gly Ile Glu Glu Ala			
50	55	60	
Arg Arg Gln Leu Leu Pro Ala Val Glu Ala Ser Ala Asp			
65	70	75	

<210> 10291

<211> 394

<212> PRT
 <213> B.fragilis

<400> 10291

Leu Val Asn Met Lys His Glu Arg Pro Cys Leu Val Ala Ser Gly Ser
 1 5 10 15
 Asp Trp Leu Gln Glu Val Leu Arg Arg Leu Leu Val Trp Val Val Val
 20 25 30
 Leu Ser Ser Gly Thr Leu Met Ala Tyr Ala Gly Asn Leu Asp Ile Ser
 35 40 45
 Gln Thr Lys Val Ile Thr Gly Thr Val Thr Glu Lys Glu Thr Gly Asp
 50 55 60
 Pro Leu Ile Gly Val Asn Val Ser Val Lys Gly Thr Ser Lys Gly Thr
 65 70 75 80
 Ile Thr Asn Leu Asn Gly Gln Tyr Ser Val Asp Val Asn Ser Asp Lys
 85 90 95
 Asp Ile Leu Val Phe Ser Phe Ile Gly Lys Ala Thr Gln Glu Lys Ala
 100 105 110
 Val Lys Gly Leu Ser His Ile Asp Val Val Met Ala Asp Asp Ala Thr
 115 120 125
 Met Leu Gly Glu Val Val Ile Gln Thr Gly Tyr Met Thr Gln Arg Lys
 130 135 140
 Ala Asp Leu Thr Gly Ser Val Ala Met Ala Asn Thr Ser Asp Leu Ala
 145 150 155 160
 Gln Asn Pro Ser Thr Asn Ala Leu Lys Ser Leu Gln Gly Lys Leu Pro
 165 170 175
 Gly Val Phe Ile Thr Thr Asp Gly Ser Pro Gly Gly Asn Ala Ser Ile
 180 185 190
 Gln Ile Arg Gly Leu Thr Ser Leu Asn Ala Gln Pro Asn Pro Leu Ile
 195 200 205
 Val Leu Asp Gly Leu Ala Gly Asp Tyr Asn Leu Arg Asp Ile Asn Pro
 210 215 220
 Ala Asn Ile Glu Ser Ile Gln Val Leu Lys Asp Ala Ala Ser Ala Ser
 225 230 235 240
 Ile Tyr Gly Ser Arg Ala Ala Gly Gly Val Ile Ile Ile Glu Thr Lys
 245 250 255
 Lys Gly Lys Gly Glu Ser Lys Ile Ser Tyr Glu Gly Arg Val Gln
 260 265 270
 Phe Ser Lys Trp Val Asn Lys Pro Asp Leu Leu Asn Thr Asp Glu Tyr
 275 280 285
 Gly Arg Ala Ile Trp Gln Ala Tyr Ala Asn Asp Asp Lys Leu Gly Glu
 290 295 300
 Ile Lys Gln Ser Val Arg Phe Asp Tyr Asp Trp Ser Tyr Asp Ser
 305 310 315 320
 Asn Gly Tyr Pro Val Leu Asn Ser Val Lys Pro Val Glu Trp Leu Asn
 325 330 335
 Thr Ala Gln Thr Met Arg Ser Ala Asp Thr Asn Trp Ile Asp Glu Ile
 340 345 350
 Ser Arg Thr Gly Val Ser Gln Asn His Gln Ile Ser Val Ser Ser Gly
 355 360 365
 Thr Asp Lys Ser Arg Thr Phe Phe Asn Leu Gly Tyr Glu Asn Thr Glu
 370 375 380
 Gly Ile Gln Ile Glu Thr Phe Trp Lys Asn
 385 390

<210> 10292

<211> 63

<212> PRT

<213> B.fragilis

<400> 10292

Arg	Gln	Val	Ser	Ser	Leu	His	Cys	Asp	Thr	Pro	Met	Val	Tyr	Arg	Gly
1					5					10					15
Ala	Ser	Gly	Leu	His	Glu	Thr	Ser	Ser	Pro	Asp	Ser	Ile	Ser	Pro	Ser
					20				25						30
Lys	Lys	Ser	Ile	Arg	Phe	Met	Val	Gly	Tyr	Tyr	Ile	Lys	Gly	Ser	Gly
					35			40				45			
Gly	Lys	Tyr	Asn	Asn	Phe	Pro	Pro	Glu	Ser	Pro	Thr	Cys	Leu	Val	
					50			55			60				

<210> 10293

<211> 393

<212> PRT

<213> *B. fragilis*

<400> 10293

Glu	Met	Glu	Thr	Phe	Tyr	Arg	Thr	His	Ala	Tyr	Leu	Val	Glu	His	Thr
1				5					10						15
Asn	Ala	Pro	Val	Arg	Arg	Asp	Leu	Met	Asp	Glu	Ile	Asn	Trp	Ser	Asp
				20				25						30	
Arg	Leu	Ile	Gly	Ile	Lys	Gly	Thr	Arg	Gly	Val	Gly	Lys	Thr	Thr	Phe
				35			40					45			
Leu	Leu	Gln	Tyr	Ala	Lys	Glu	Lys	Phe	Gly	Thr	Asp	Arg	Ser	Cys	Leu
				50		55				60					
Phe	Ile	Asn	Met	Asn	Asn	Phe	Tyr	Phe	Ser	Gly	His	Ser	Ile	Val	Asp
				65		70			75					80	
Phe	Ala	Asn	Glu	Phe	Gln	Lys	Arg	Gly	Gly	Lys	Val	Leu	Leu	Ile	Asp
				85			90						95		
Gln	Val	Phe	Lys	His	Pro	Asp	Trp	Ser	Arg	Glu	Leu	Arg	Met	Cys	Tyr
				100			105						110		
Asp	Arg	Phe	Pro	Asn	Leu	Lys	Ile	Val	Phe	Thr	Gly	Ser	Ser	Val	Met
				115			120					125			
Arg	Leu	Lys	Glu	Glu	Asn	Leu	Glu	Leu	Arg	Asp	Ile	Val	Lys	Ser	Tyr
				130		135			140						
Asn	Leu	Arg	Gly	Phe	Ser	Phe	Arg	Glu	Phe	Leu	Asn	Leu	Gln	Thr	Gly
				145		150			155				160		
Met	Lys	Phe	Arg	His	Tyr	Thr	Leu	Glu	Glu	Ile	Leu	Ser	Ser	His	Glu
					165			170					175		
Gln	Ile	Ala	Lys	Gly	Val	Leu	Ser	Lys	Val	Arg	Pro	Leu	Asp	Tyr	Phe
					180			185					190		
Gln	Asp	Tyr	Leu	His	His	Gly	Phe	Tyr	Pro	Phe	Phe	Leu	Glu	Lys	Arg
				195			200					205			
Asn	Phe	Ser	Glu	Asn	Leu	Leu	Lys	Thr	Met	Asn	Met	Met	Val	Glu	Val
				210		215			220						
Asp	Ile	Leu	Leu	Ile	Lys	Gln	Ile	Glu	Leu	Lys	Tyr	Leu	Ser	Lys	Ile
				225		230			235				240		
Lys	Lys	Leu	Leu	Tyr	Leu	Leu	Ala	Val	Asp	Gly	Pro	Lys	Ala	Pro	Asn
					245			250				255			
Val	Ser	Gln	Leu	Ala	Ser	Asp	Ile	Gln	Thr	Ser	Arg	Ala	Thr	Val	Met
					260			265				270			
Asn	Tyr	Ile	Lys	Tyr	Leu	Ala	Asp	Ala	Arg	Leu	Ile	Asn	Leu	Val	Tyr
				275			280				285				
Pro	Lys	Gly	Glu	Glu	Phe	Pro	Lys	Lys	Pro	Ser	Lys	Ile	Met	Leu	His
				290			295			300					
Asn	Pro	Asn	Leu	Met	Tyr	Ser	Ile	Tyr	Pro	Val	Lys	Val	Glu	Glu	Gln
				305		310			315				320		
Asp	Val	Leu	Asp	Thr	Phe	Phe	Val	Asn	Thr	Met	Trp	Lys	Asp	His	Lys
					325			330				335			

Val His Lys Gly Asp Lys Asn Thr Ser Phe Met Val Asp Glu Val Met
 340 345 350
 Pro Phe Lys Ile Cys Cys Glu Gly Ala Lys Ile Lys Asn Asn Pro Gly
 355 360 365
 Val Thr Tyr Ala Leu His Lys Ala Glu Ile Gly Arg Gly Asn Gln Ile
 370 375 380
 Pro Leu Trp Met Phe Gly Phe Leu Tyr
 385 390

<210> 10294

<211> 492

<212> PRT

<213> B.fragilis

<400> 10294

Glu Asp Arg Ala Gly Arg Gly Thr Ser Leu Leu Phe Leu Phe Leu Leu
 1 5 10 15
 Ser Leu Leu Pro Leu His Ala Gln Thr Ser Pro Lys His Glu Val Arg
 20 25 30
 Ala Ala Trp Ile Thr Ala Val Tyr Gly Leu Asp Trp Pro Arg Thr Lys
 35 40 45
 Ala Thr Thr Pro Ala Gly Ile Arg Arg Gln Lys Glu Glu Leu Ile Asp
 50 55 60
 Ile Leu Asp Arg Leu Lys Glu Ala Asn Phe Asn Thr Val Leu Phe Gln
 65 70 75 80
 Thr Arg Thr Arg Gly Asp Val Leu Tyr Arg Ser Asp Ile Glu Pro Phe
 85 90 95
 Asn Ser Ile Leu Thr Gly Lys Thr Gly Asp Pro Gly Tyr Asp Pro
 100 105 110
 Leu Ala Phe Ala Val Glu Glu Cys His Lys Arg Gly Met Glu Cys His
 115 120 125
 Ala Trp Met Val Thr Ile Pro Leu Gly Lys Lys His Val Ala Ser
 130 135 140
 Leu Gly Lys Gln Ser Val Thr Arg Arg Glu Arg Asp Ile Cys Val Pro
 145 150 155 160
 Tyr Lys Asn Glu Tyr Phe Leu Asn Pro Gly His Pro Ala Thr Lys Glu
 165 170 175
 Tyr Leu Met Lys Leu Val Arg Glu Val Val Ser Arg Tyr Asp Val Asp
 180 185 190
 Gly Val His Phe Asp Tyr Leu Arg Tyr Pro Glu Asn Ala Pro Arg Phe
 195 200 205
 Pro Asp Ser Tyr Asp Phe Arg Arg Tyr Gly Lys Gly Arg Thr Leu Ala
 210 215 220
 Gln Trp Arg Arg Asp Asn Leu Thr Asp Ile Val Arg Tyr Ile Tyr Asn
 225 230 235 240
 Gly Val Lys Ala Met Lys Pro Trp Val Lys Val Ser Thr Cys Pro Val
 245 250 255
 Gly Lys Tyr Arg Asp Thr Ser Arg Tyr Ser Ser Lys Gly Trp Asn Ala
 260 265 270
 Phe Phe Thr Val Tyr Gln Asp Pro Gln Gly Trp Leu Gly Glu Gly Ile
 275 280 285
 Gln Asp Gln Ile Tyr Pro Met Met Tyr Phe Arg Gly Asn Gly Phe Tyr
 290 295 300
 Pro Phe Ala Leu Asp Trp Gln Glu Gln Ser Asn Gly Arg His Ile Val
 305 310 315 320
 Pro Gly Leu Gly Ile Tyr Phe Leu His Pro Asp Glu Gly Asn Trp Thr
 325 330 335
 Thr Glu Glu Val Glu Arg Gln Met His Phe Ile Arg Ser Asn Arg Leu
 340 345 350

Ala Gly Glu Ala His Tyr Arg Val Lys Tyr Leu Met Asp Asn Thr Gln
 355 360 365
 Gly Val Tyr Asp Leu Leu Leu Asp His Phe Tyr Gln Tyr Pro Ala Leu
 370 375 380
 Gln Pro Pro Met Pro Trp Ile Asp Asn Val Ser Pro Thr Ala Pro Ser
 385 390 395 400
 Ala Leu Lys Ala Val Ser Ala Gly Asp Gly Tyr Thr Arg Leu Asn Trp
 405 410 415
 Lys Ala Ala Thr Asp Asn Asp Lys Gln Asn Ala Pro Met Tyr Val Val
 420 425 430
 Tyr Ala Ser Asp Thr Tyr Pro Val Asp Ile Thr Asn Pro Glu Asn Ile
 435 440 445
 Leu Val Gln Asn Leu Arg Asp Thr His Tyr Ile Tyr Ala Pro Ile Arg
 450 455 460
 Pro Trp Thr Ala Arg Lys Tyr Phe Ala Val Thr Ala Val Asp Arg Cys
 465 470 475 480
 Gly Asn Glu Ser Lys Ala Ala Gln Gln Glu Glu Lys
 485 490

<210> 10295

<211> 301

<212> PRT

<213> B.fragilis

<400> 10295

Lys Leu Ile His Thr Met Asn Ser Ile Ile Val Gly Met Gly Glu Ala
 1 5 10 15
 Leu Trp Asp Val Leu Pro Glu Gly Lys Lys Ile Gly Gly Ala Pro Ala
 20 25 30
 Asn Phe Ala Tyr His Val Ser Gln Phe Gly Phe Asp Ser Arg Val Val
 35 40 45
 Ser Ala Val Gly Asn Asp Glu Leu Gly Asp Glu Ile Leu Glu Ile Phe
 50 55 60
 Arg Glu Lys Gln Leu Lys His Gln Leu Glu Arg Val Asn Tyr Pro Thr
 65 70 75 80
 Gly Thr Val Gln Val Thr Leu Asp Asn Gly Gly Val Pro Cys Tyr Asp
 85 90 95
 Ile Lys Glu Gly Val Ala Trp Asp Asn Ile Pro Phe Thr Asp Asp Leu
 100 105 110
 Lys Arg Leu Ala Leu Ser Thr Arg Ala Val Cys Phe Gly Ser Leu Ala
 115 120 125
 Gln Arg Asp Glu Val Ser Arg Ala Thr Ile Asn Arg Phe Leu Asp Thr
 130 135 140
 Met Pro Asp Met Glu Gly Gln Leu Lys Ile Phe Asp Ile Asn Leu Arg
 145 150 155 160
 Gln Asn Phe Tyr Thr Lys Glu Val Leu Arg Glu Ser Phe Arg Lys Cys
 165 170 175
 Asn Val Leu Lys Ile Asn Asp Glu Glu Leu Ile Leu Ile Ser Arg Met
 180 185 190
 Phe Gly Tyr Pro Gly Ile Asp Leu Gln Asp Lys Cys Trp Ile Leu Leu
 195 200 205
 Ala Lys Tyr Asn Leu Lys Met Leu Ile Leu Thr Cys Gly Thr Asn Gly
 210 215 220
 Ser Tyr Val Phe Thr Pro Gly Thr Val Ser Phe Gln Glu Thr Pro Lys
 225 230 235 240
 Val Pro Val Ala Asp Thr Val Gly Ala Gly Asp Ser Phe Thr Ala Ala
 245 250 255
 Phe Cys Ser Ser Val Leu Lys Gly Lys Ser Ile Pro Glu Ala His Arg
 260 265 270

Leu Ala Val Glu Val Ser Ala Tyr Val Cys Thr Gln Ser Gly Ala Met
 275 280 285
 Pro Val Leu Pro Glu Ala Leu Arg Asn Arg Leu Asn Asp
 290 295 300

<210> 10296

<211> 768

<212> PRT

<213> B.fragilis

<400> 10296

Thr Lys Asn Lys Pro Asn Lys Arg Thr Thr His Arg Met Lys Ser Met
 1 5 10 15
 Arg Ser Ile His Ser Leu Ile Arg Cys Cys Met Ile Leu Leu Leu
 20 25 30
 Thr Ser Cys Tyr Ser Lys Glu Glu Arg Arg Val Leu Val Ile His Ser
 35 40 45
 Tyr Glu Lys Asp Tyr Gln Gly Tyr Ala Glu Phe Asn Lys Leu Ile Lys
 50 55 60
 Lys Glu Phe Ala Lys Ala His Ile Pro Val Glu Leu Thr Phe Phe Tyr
 65 70 75 80
 Leu Asn Cys Glu Ile Asn Asn Glu Gln Gln Glu Ile Asp Lys Ile Asn
 85 90 95
 Asn Phe Leu Asp Ser Ile Ser Lys Trp Lys Pro Glu Val Leu Leu Val
 100 105 110
 Asn Asp Asp Gln Ala Thr Tyr Ser Leu Leu Glu Thr His His Pro Leu
 115 120 125
 Leu Lys Gly Ile Pro Ile Val Phe Ser Gly Val Asn Tyr Pro Asn Trp
 130 135 140
 Glu Leu Ile Gly Gln Tyr Asn Asn Val Thr Gly Phe His Asp Lys Ile
 145 150 155 160
 Asp Phe Arg Lys Asn Leu Glu Met Val His Lys Leu Thr Gly Lys Asn
 165 170 175
 His Ile Tyr Thr Ile Leu Asp Phe Thr Phe Leu Asp Arg Lys Val Arg
 180 185 190
 Asn Asp Ile Asp Asn Gln Leu Lys Ser Thr Asp Ile Ile Ser Asn Leu
 195 200 205
 Asp Trp His Leu Asp Lys Asn Asp Thr Arg Lys Glu Ala Glu Lys Gly
 210 215 220
 His Ile Ile Ile Asn Ala Leu Ser Ala Arg Asn Leu Ser Lys Asn Gln
 225 230 235 240
 Asn Lys Asp Gln Thr Lys Gly Gly Asp Phe Ile Trp Ser Ile Ser Lys
 245 250 255
 Tyr Ser Thr Leu Pro Tyr Leu Gln Thr Lys Phe Asp Tyr Thr Thr Val
 260 265 270
 Thr Met Ala Ser Leu Ser Thr Arg Gln Arg Phe Thr Thr Ile Asn Glu
 275 280 285
 Leu Phe Asp Cys Gly Arg Asp Phe Leu Gly Gly Tyr Ile Thr Pro Met
 290 295 300
 His Ile Gln Val Glu Glu Ser Val His Ala Ala Ala Arg Ile Leu Asn
 305 310 315 320
 Gly Glu Asn Val Ala Asp Ile Pro Ile Gln Glu Ser Ala Lys Gly Tyr
 325 330 335
 Phe Ile Asp Trp Asn Ala Met Gln Lys Glu His Leu Thr Ile Ala Asp
 340 345 350
 Ile Pro His Glu Tyr Thr Ile Ile Asn Ile Pro Phe Lys Thr Arg His
 355 360 365
 Pro Ile Val Trp Trp Phe Ala Leu Leu Gly Ser Ile Thr Ala Ile Val
 370 375 380

Ser Leu Leu Ser Gly Ile Thr Tyr Leu Tyr Trp Arg Glu Thr Lys Arg
 385 390 395 400
 Lys Arg Ser Ile Leu Tyr Glu Leu Glu Asp Glu Lys Glu Ser Leu Ala
 405 410 415
 Leu Ala Val Glu Gly Ser Asp Thr Tyr Ala Trp Arg Leu Lys Asp Asp
 420 425 430
 Thr Met Val Phe Glu Tyr Ala Phe Trp Lys Asn Leu Gly Met Ala Pro
 435 440 445
 His Pro Leu Thr Ile Asp Gly Phe Leu Ser Phe Val Asp Ala Asp Tyr
 450 455 460
 Leu Asp Thr Thr Gln Ala Leu Leu Thr Lys Asn Ala Thr Asn Gly Lys
 465 470 475 480
 His Phe Ile Lys Leu Lys Cys Asp Phe Asn Gly Thr Gly Tyr Gln Trp
 485 490 495
 Trp Glu Leu Arg Cys Ser Thr Met Lys Ser Ala Leu Gly Gly Gln Lys
 500 505 510
 Thr Thr Gly Leu Leu Leu Asn Ile Glu Asp Tyr Lys Lys Arg Glu Gln
 515 520 525
 Glu Leu Ile Glu Ala Arg Lys Met Ala Glu Lys Ala Glu Leu Lys Glu
 530 535 540
 Ser Phe Leu Ala Asn Ile Ser His Glu Ile Arg Thr Pro Leu Asn Ala
 545 550 555 560
 Ile Val Gly Phe Ser Thr Leu Leu Ala Ser Pro Asp Asp Thr Asp Ile
 565 570 575
 Thr Pro Glu Glu Lys Glu Gln Tyr Ile Asp Thr Ile Asn Arg Asn Ser
 580 585 590
 Glu Leu Leu Leu Lys Leu Ile Asn Asp Ile Leu Glu Leu Ser Arg Ile
 595 600 605
 Glu Ser Gly Tyr Met Ser Phe Asp Cys Asp Asp Tyr Pro Leu Asp Ala
 610 615 620
 Leu Ile Arg Asp Thr Tyr Gln Thr His Lys Ile Leu Ile Pro Gly Gln
 625 630 635 640
 Leu His Phe Leu Leu Glu Glu Gly Glu Lys Gly Leu Ile Val His Val
 645 650 655
 Asp Lys Asn Arg Leu Val Gln Val Ile Thr Asn Phe Leu Asn Asn Ala
 660 665 670
 Ser Lys Phe Thr Arg Glu Gly Ser Ile Lys Leu Gly Trp Ser Tyr Met
 675 680 685
 Pro Gln Thr Glu Glu Val Glu Ile Tyr Val Glu Asp Thr Gly Ile Gly
 690 695 700
 Ile Pro Gln Ser Glu Gln Lys Met Ile Phe Gly Arg Phe Tyr Lys Gln
 705 710 715 720
 Asn Glu Phe Ala Gln Gly Thr Gly Leu Gly Leu Ser Ile Cys Lys Leu
 725 730 735
 Ile Ile Glu Lys Leu Gln Gly Arg Leu Ser Leu Arg Ser Glu Ala Gly
 740 745 750
 Thr Gly Ser Arg Phe Ser Ile Phe Phe Ser Cys Lys Lys Gln Ser Ile
 755 760 765

<210> 10297

<211> 282

<212> PRT

<213> B.fragilis

<400> 10297

Asn His Ser Lys Cys Asn Arg Ile Met Ile Asn Ile Gly Gln Tyr Ile

1 5 10 15

Glu Thr Leu Ile Asn Trp Met Met Ile His Phe Ser Thr Phe Phe Asp

20 25 30

Ala Leu Asn Leu Gly Ile Gly Ser Phe Ile Asn Gly Phe Gln His Ile
 35 40 45
 Leu Phe Gly Ile Pro Phe Tyr Leu Thr Ile Ala Ala Met Val Leu Leu
 50 55 60
 Ala Trp Ala Lys Ala Gly Arg Gly Val Ala Val Phe Thr Leu Leu Gly
 65 70 75 80
 Leu Leu Leu Ile Tyr Gly Met Gly Phe Trp Glu Ala Thr Met Gln Thr
 85 90 95
 Leu Ala Leu Val Leu Ser Ser Thr Cys Leu Ala Leu Ile Val Gly Val
 100 105 110
 Pro Ile Gly Val Trp Thr Ala Asn Ser Asn Arg Ala Glu Lys Val Ile
 115 120 125
 His Pro Ile Leu Asp Leu Met Gln Thr Met Pro Ala Phe Val Tyr Leu
 130 135 140
 Ile Pro Ala Val Leu Phe Phe Gly Leu Gly Val Val Pro Gly Val Phe
 145 150 155 160
 Ala Thr Ile Ile Phe Ala Met Pro Pro Val Ile Arg Leu Thr Gly Leu
 165 170 175
 Gly Ile Arg Gln Val Pro Lys Asn Val Val Glu Ala Ser Arg Ser Phe
 180 185 190
 Gly Ala Thr Arg Trp Gln Leu Leu Tyr Lys Val Gln Leu Pro Leu Ala
 195 200 205
 Leu Pro Thr Ile Leu Thr Gly Val Asn Gln Thr Ile Met Met Ser Leu
 210 215 220
 Ser Met Val Val Ile Ala Ala Met Ile Ala Ala Gly Gly Leu Gly Glu
 225 230 235 240
 Ile Val Leu Lys Gly Ile Thr Gln Met Lys Ile Gly Leu Gly Phe Glu
 245 250 255
 Gly Gly Ile Ala Val Val Ile Leu Ala Ile Ile Leu Asp Arg Ile Thr
 260 265 270
 Gln Gly Met Val Arg Arg Lys Asp Lys Lys
 275 280

<210> 10298

<211> 285

<212> PRT

<213> B.fragilis

<400> 10298

Asp Met Arg Lys Tyr Arg Ile Ile Gly Ser Leu Leu Leu Ala Val
 1 5 10 15
 Met Cys Val Ala Cys Asn Pro Asp Ser Gly Lys Lys Ile Ser Ile
 20 25 30
 Ala Tyr Ala Asn Trp Leu Glu Gly Ile Ala Met Ser His Leu Ala Lys
 35 40 45
 Val Val Leu Glu Glu Lys Gly Tyr Glu Val Glu Leu Leu Asn Ala Asp
 50 55 60
 Val Ala Pro Val Phe Ala Ser Val Ser Arg Lys Lys Ala Asp Val Phe
 65 70 75 80
 Met Asp Ala Trp Leu Pro Val Thr Met Lys Asp Tyr Ile Asp Gln Tyr
 85 90 95
 Gly Asp Gln Ile Glu Phe Ile Gly Glu Val Tyr Asp Ser Ala Arg Val
 100 105 110
 Gly Leu Val Val Pro Gln Tyr Val Thr Ile Asp Ser Ile Gly Glu Leu
 115 120 125
 Ala Ala Tyr Lys Gly Gln Phe Ser Ser Glu Ile Val Gly Ile Asp Ala
 130 135 140
 Gly Ala Gly Ile Met Lys Thr Thr Asp Lys Ala Ile Gly Asp Tyr Gly
 145 150 155 160

Leu Asp Gly Tyr Lys Leu Leu Thr Ser Ser Ser Ser Thr Met Leu Ala
 165 170 175
 Ser Leu Gln Lys Ala Met Glu Lys Glu Ala Trp Ile Val Ile Thr Gly
 180 185 190
 Trp Thr Pro His Trp Met Phe Asp Arg Tyr Pro Leu Lys Phe Leu His
 195 200 205
 Asp Pro Lys Gly Thr Tyr Gly Asn Val Glu Ser Ile Tyr Val Val Gly
 210 215 220
 Trp Lys Gly Phe Thr Glu Lys Asp Pro Phe Ala Ala Lys Phe Phe Ser
 225 230 235 240
 Asn Ile Lys Phe Thr Thr Glu Glu Ile Ser Ser Leu Met Lys Ala Leu
 245 250 255
 Lys Asp Ala Arg Met Asp Glu Glu Asp Leu Val Arg Lys Trp Arg Asp
 260 265 270
 Glu His Arg Glu Leu Val Glu Ser Trp Ile Pro Glu Ser
 275 280 285

<210> 10299

<211> 909

<212> PRT

<213> B.fragilis

<400> 10299

Pro Thr Met Asn Arg Ile Leu Phe Leu Leu Gly Leu Met Leu Ser Gly
 1 5 10 15
 Leu Leu Val Ser Cys Ser Pro Asp Ala Pro Arg Tyr Thr Ile Gly Val
 20 25 30
 Ser Gln Cys Ser Asp Asp Thr Trp Arg His Lys Met Asn Asp Glu Ile
 35 40 45
 Gln Arg Glu Ala Leu Phe Tyr Gly Val Lys Val Glu Thr Arg Thr
 50 55 60
 Ala His Asp Asp Ser Arg Arg Gln Ile Glu Asp Ile Arg Tyr Phe Ile
 65 70 75 80
 Arg Gln Lys Val Asp Leu Leu Ile Val Ala Ala Asn Glu Gly Met Ala
 85 90 95
 Leu Thr Pro Val Val Glu Glu Ala Phe Asp Lys Gly Ile Pro Val Ile
 100 105 110
 Met Val Asp Arg Arg Ile Leu Ser Asp Lys Tyr Thr Ala Tyr Ile Gly
 115 120 125
 Ala Asp Asn Tyr Glu Leu Gly Lys Ala Val Gly Asn Tyr Ile Ala His
 130 135 140
 Arg Leu Lys Gly Arg Gly Lys Val Val Glu Leu Ser Gly Leu Val Gly
 145 150 155 160
 Ser Thr Pro Ala Ile Glu Arg His Gln Gly Phe Met Ser Ala Ile Ser
 165 170 175
 Gln Tyr Pro Asp Met Thr Leu Leu Ala Ser Glu Asp Ala Gly Trp Leu
 180 185 190
 Gln Gln Pro Ala Glu Ala Lys Met Asp Ser Leu Leu Gln Arg Phe Pro
 195 200 205
 Glu Ile Asp Ala Val Tyr Gly Met Asn Asp Arg Met Ala Ala Gly Ala
 210 215 220
 Phe Arg Ala Ala Gly Arg Arg Gly Arg Glu Lys Glu Met Ile Phe Val
 225 230 235 240
 Gly Ile Asp Ala Leu Pro Gly Lys Gly Asn Gly Val Glu Leu Val Leu
 245 250 255
 Asp Ser Val Leu Asp Ala Thr Phe Ile Tyr Pro Thr Glu Gly Asp Lys
 260 265 270
 Val Val Gln Leu Ala Met Asp Ile Leu Glu Lys Lys Pro Phe Glu Arg
 275 280 285

Glu Thr Lys Leu Lys Thr Ala Val Val Asp Ala Val Asn Ala His Val
 290 295 300
 Met Glu Leu Gln Thr Asn His Ile Gly Glu Leu Asp Gly Lys Ile Glu
 305 310 315 320
 Thr Leu Asn Asp Arg Val Gly Ile Tyr Leu Ser Arg Val Ala Thr Gln
 325 330 335
 Arg Ile Val Leu Tyr Gly Gly Leu Ile Leu Leu Ile Val Gly
 340 345 350
 Leu Leu Ile Val Val Tyr Lys Ser Leu Arg Ser Lys Asn Ser Leu Asn
 355 360 365
 Arg Glu Leu Ser Arg Gln Lys Glu Gln Leu Glu Glu Gln Arg Asp Gln
 370 375 380
 Leu Ile Glu Leu Ser His Gln Leu Glu Glu Ala Thr His Ala Lys Leu
 385 390 395 400
 Val Phe Phe Thr Asn Ile Ser His Asp Phe Arg Thr Pro Leu Thr Leu
 405 410 415
 Val Ala Asp Pro Val Glu Gln Leu Leu Ala Asp Pro Ser Leu Glu Gly
 420 425 430
 Asp Arg Arg Arg Met Leu Leu Leu Val Gln Arg Asn Val Gln Ile Leu
 435 440 445
 Leu Arg Leu Val Asn Gln Ile Leu Asp Phe Arg Arg Tyr Glu Thr Gly
 450 455 460
 Lys Met Glu Phe Thr Pro Val Pro Leu Asp Leu Leu Gln Cys Phe Val
 465 470 475 480
 Gly Trp Asn Asp Ser Phe Gln Ala Ala Ala Arg Arg Lys His Ile His
 485 490 495
 Phe Ser Phe Asp Ser Val Pro Asp Thr Asp Tyr His Thr Gln Ala Asp
 500 505 510
 Ala Glu Lys Leu Glu Arg Ile Tyr Phe Asn Leu Leu Ala Asn Ala Phe
 515 520 525
 Lys Phe Thr Pro Glu Asn Gly Lys Val Thr Val Arg Leu Ala Ala Leu
 530 535 540
 Gln Lys Asp Gly Ala Pro Phe Phe Arg Phe Thr Val Ala Asn Thr Gly
 545 550 555 560
 Ser Leu Ile Ser Ala Glu His Ile Arg Ser Ile Phe Asp Arg Phe Tyr
 565 570 575
 Lys Ile Asp Arg His His Thr Gly Ser Gly Ile Gly Leu Ala Leu Val
 580 585 590
 Lys Ala Phe Val Glu Ile His Gly Gly Ser Ile Ser Val Glu Ser Asp
 595 600 605
 Glu Arg Leu Gly Thr Val Phe Thr Val Asp Leu Pro Val Arg Thr Cys
 610 615 620
 Glu Glu Gly Ala Cys Val Val Thr Ala Pro Met Glu Glu Ser Ala Pro
 625 630 635 640
 Asp Arg Val Asp Ser Leu Leu Arg Glu Asp Glu Ala Glu Asn Leu Asn
 645 650 655
 Asp Pro Ser Lys Pro Ser Val Leu Val Ile Asp Asp Asn Ala Asp Ile
 660 665 670
 Arg Ala Tyr Val His Thr Leu Leu Asn Ser Glu Tyr Ser Ile Ile Glu
 675 680 685
 Ala Ala Asp Gly Thr Glu Gly Ile Arg Lys Ala Met Lys Tyr Val Pro
 690 695 700
 Asp Val Ile Ile Ser Asp Val Met Met Pro Gly Ile Asp Gly Ile Glu
 705 710 715 720
 Cys Cys Arg Arg Leu Lys Gly Glu Leu Gln Thr Cys His Ile Pro Val
 725 730 735
 Ile Leu Leu Thr Ala Cys Ser Leu Asp Glu Gln Arg Ile Gln Gly Tyr
 740 745 750
 Ala Gly Gly Ala Asp Ser Tyr Ile Ser Lys Pro Phe Ser Ser Gln Leu

755	760	765
Leu Leu Thr Arg Ile Arg Asn Leu Ile Glu Ser Arg Gln Arg Met Lys		
770	775	780
Gln Phe Phe Gly Asp Arg Gln Thr Leu Ala Lys Glu Asp Ile Cys Asp		
785	790	795
Met Asp Lys Asp Phe Val Glu Arg Phe Lys Ser Leu Ile Glu Val Lys		
805	810	815
Met Gly Asp Ser Glu Leu Asn Val Glu Asp Leu Gly Lys Glu Met Gly		
820	825	830
Leu Ser Arg Val Gln Leu Tyr Arg Lys Ile Lys Ser Leu Thr Asn Tyr		
835	840	845
Ala Pro Asn Glu Leu Leu Arg Met Ala Arg Leu Lys Lys Ala Ala Ser		
850	855	860
Leu Leu Ala Ser Ser Asp Met Thr Ile Ala Glu Val Gly Tyr Glu Val		
865	870	875
Gly Phe Thr Ser Pro Ser Tyr Phe Ala Lys Cys Tyr Lys Glu Gln Phe		
885	890	895
Gly Glu Ser Pro Thr Glu Phe Leu Lys Arg Ser Gly Leu		
900	905	

<210> 10300

<211> 214

<212> PRT

<213> B.fragilis

<400> 10300

Thr Lys Met Asn Arg Phe His His Arg Val Thr Gln Ser Leu Thr Glu			
1	5	10	15
Phe Lys Phe Leu Val His Arg Met Phe Lys Arg Lys Ile Phe Ser Val			
20	25	30	
Arg Leu Cys Val Thr Leu Trp Cys Pro Pro Lys Asn Gly Ile Ile Met			
35	40	45	
Asn Ile Thr Ile Arg Pro Thr Arg Leu Glu Glu Leu Gly Gln Val Met			
50	55	60	
Pro Phe Tyr Glu Arg Ala Arg Arg Phe Met Ala Thr Asn Gly Asn Ala			
65	70	75	80
Asn Gln Trp Ile Asn Gly Tyr Pro Ser Pro Asp Asp Ile Arg Gln Asp			
85	90	95	
Ile Glu Asn Gly Ser Ser Tyr Val Phe Val Asn Glu Asn Gln Glu Leu			
100	105	110	
Glu Gly Cys Phe Ala Phe Ile Arg Gly Glu Asp Pro Asn Tyr Lys Val			
115	120	125	
Ile Lys Asp Gly Ala Trp Leu Asn Asp Ala Pro Tyr Gly Val Ile His			
130	135	140	
Arg Ile Ala Ser Gly Gly Arg Val Lys Gly Leu Met Asp Leu Cys Leu			
145	150	155	160
Glu Trp Cys Ser Ser His Cys Pro Asn Leu Arg Val Asp Thr His Arg			
165	170	175	
Asp Asn Lys Val Leu Gln Asn Ile Leu Leu Lys Asn Gly Phe Thr Tyr			
180	185	190	
Cys Gly Ile Ile Tyr Val Lys Asn Gly Thr Glu Arg Leu Ala Tyr Gln			
195	200	205	
Arg Thr Ala Val Thr Arg			
210			

<210> 10301

<211> 281

<212> PRT

<213> B.fragilis

<400> 10301

Arg His Val Asn Pro Gly Cys Tyr Phe Gly Gly Ser Ala Thr Gln Tyr
 1 5 10 15
 Phe Ile Gly Asp Phe Asp Gly Glu Lys Phe Val Cys Asp Asn Lys Pro
 20 25 30
 Glu Thr Val Lys Trp Leu Asp Trp Gly Lys Asp His Tyr Ala Thr Val
 35 40 45
 Cys Phe Ser Asn Thr Gly Asp Arg Thr Ile Ala Val Pro Trp Met Ser
 50 55 60
 Asn Trp Gln Tyr Ala Asn Ile Val Pro Thr Arg Gln Phe Arg Ser Ala
 65 70 75 80
 Asn Ala Leu Pro Arg Glu Leu Ser Leu Tyr Thr Gln Asp Gly Asp Ile
 85 90 95
 Tyr Met Ala Ala Ala Pro Val Glu Glu Thr Lys Ser Leu Arg Lys Glu
 100 105 110
 Ser Arg Glu Ile Pro Ala Phe Glu Val Gly Asp Ala Tyr His Val Asp
 115 120 125
 Ser Leu Leu Ser Asp Asn Lys Gly Ala Tyr Glu Ile Glu Leu Glu Leu
 130 135 140
 Ala Ala Gly Ser Ala Glu Ile Met Gly Leu Lys Leu Phe Asn Glu Lys
 145 150 155 160
 Gly Glu Asn Val Asp Ile Tyr Ile Ser Leu Pro Glu Lys Lys Leu Val
 165 170 175
 Met Asp Arg Thr Lys Ser Gly Ile Val Asp Phe Gly Lys Asp Ser Ala
 180 185 190
 Pro His Ala Ile Glu Ala His Asp Arg Arg Lys Gln Asn Ser Ile Asn
 195 200 205
 Tyr Val Asp Asp Phe Ala Leu Gly Thr Trp Ala Pro Val Gln Lys Ala
 210 215 220
 Gly Asn Tyr Lys Leu Asp Ile Phe Val Asp Lys Cys Ser Val Glu Ile
 225 230 235 240
 Phe Leu Asn Gly Gly Lys Ile Ala Met Thr Asn Leu Ile Phe Pro Thr
 245 250 255
 Thr Pro Tyr Asn Gln Met Ser Phe Tyr Ser Arg Gly Gly Ala Phe Lys
 260 265 270
 Val Asp Arg Cys Lys Ile Tyr Arg Leu
 275 280

<210> 10302

<211> 390
 <212> PRT
 <213> B.fragilis

<400> 10302

His Ile Met Glu Asn Thr Lys Asn Asn Ser Tyr Met Lys Leu Ile Pro
 1 5 10 15
 Val Met Leu Cys Phe Phe Ala Met Gly Phe Val Asp Leu Val Gly Ile
 20 25 30
 Ala Ser Asn Tyr Val Lys Ala Asp Leu Gly Leu Thr Asp Ser Gln Ala
 35 40 45
 Asn Ile Phe Pro Ser Leu Val Phe Phe Trp Phe Leu Ile Phe Ser Val
 50 55 60
 Pro Thr Gly Met Leu Met Asn Arg Ile Gly Arg Lys Lys Thr Val Leu
 65 70 75 80
 Leu Ser Leu Val Ile Thr Phe Ala Ser Leu Leu Leu Pro Val Phe Gly
 85 90 95
 Asp Ser Tyr Leu Leu Met Leu Val Ser Phe Ser Leu Leu Gly Ile Gly
 100 105 110

Asn Ala Leu Met Gln Thr Ser Leu Asn Pro Val Leu Ser Asn Ile Val
 115 120 125
 Ser Gly Glu Arg Leu Ala Ser Thr Leu Thr Phe Gly Gln Phe Val Lys
 130 135 140
 Thr Ile Ala Ser Phe Leu Ala Pro Tyr Ile Ala Met Trp Gly Ala Ile
 145 150 155 160
 Glu Ala Ile Pro Thr Phe Asp Leu Gly Trp Arg Val Leu Phe Pro Ile
 165 170 175
 Tyr Met Val Val Ala Val Val Ala Ile Leu Leu Leu Asn Ala Thr Gln
 180 185 190
 Ile Thr Glu Glu Pro Glu Glu Gly Lys Pro Ser Thr Phe Gly Gln Cys
 195 200 205
 Leu Ala Leu Leu Gly Lys Pro Phe Ile Leu Leu Ser Phe Leu Gly Ile
 210 215 220
 Met Cys His Val Gly Ile Asp Val Gly Thr Asn Thr Ala Pro Lys
 225 230 235 240
 Ile Leu Met Glu Arg Leu Gly Met Thr Leu Ala Asp Ala Gly Phe Ala
 245 250 255
 Thr Ser Leu Tyr Phe Ile Phe Arg Thr Ala Gly Cys Phe Leu Gly Ala
 260 265 270
 Phe Ile Leu Gln Lys Met Ala Ala Lys Thr Phe Phe Ala Ile Ser Val
 275 280 285
 Leu Cys Met Leu Ala Ala Met Phe Gly Leu Phe Val Phe Gln Asp Gln
 290 295 300
 Ala Met Ile Tyr Val Cys Ile Ala Leu Ile Gly Phe Gly Asn Ser Asn
 305 310 315 320
 Val Phe Pro Ile Ile Phe Ser Gln Ala Met Leu Tyr Met Pro Asp Lys
 325 330 335
 Lys Asn Glu Val Ser Gly Leu Met Ile Met Gly Leu Phe Gly Gly Thr
 340 345 350
 Ile Phe Pro Leu Ala Met Gly Val Ala Ser Asp Ala Val Gly Gln Ser
 355 360 365
 Gly Ala Val Ala Val Met Leu Val Gly Val Leu Tyr Leu Met Phe Tyr
 370 375 380
 Thr Trp Arg Ile Lys Lys
 385 390

<210> 10303

<211> 124

<212> PRT

<213> B.fragilis

<400> 10303

Arg Asn Ser Leu Tyr Lys Ser Asn Thr Ser Met Lys Asp Tyr Lys Glu
 1 5 10 15
 Asn Lys Ser Asn Leu Ser Glu Thr Phe Cys Asn Glu Val Tyr Ser Val
 20 25 30
 Val Arg Glu Ile Pro Ala Gly Ser Val Thr Thr Tyr Gly Asp Ile Ala
 35 40 45
 Ala Leu Leu Gly Met Pro Gln Tyr Ser Arg Met Val Gly Arg Ala Leu
 50 55 60
 Arg Gln Val Pro Ala Gly Leu Asn Leu Pro Cys His Arg Val Val Asn
 65 70 75 80
 Ala Ile Gly Arg Leu Val Pro Gly Trp Asp Glu Gln Arg Arg Leu Leu
 85 90 95
 Asp Ala Glu Gly Val Ser Phe Arg Lys Asn Gly Cys Val Asp Leu Arg
 100 105 110
 Leu His Arg Trp Arg Asp Asp Ser Val Leu Ala Asp
 115 120

<210> 10304

<211> 412

<212> PRT

<213> B.fragilis

<400> 10304

Thr Leu Leu Cys Met Ser Lys Ile Thr Ile Lys Asp Leu Tyr Leu Ile
 1 5 10 15
 Phe Gly Asn Asp Lys Gln His Ala Leu Arg Met Leu Lys Glu Glu Lys
 20 25 30
 Ser Lys Ser Glu Ile Leu Lys Ala Thr Gly Cys Thr Val Ala Val Lys
 35 40 45
 Asp Ala Asn Leu Ser Ile Arg Glu Gly Glu Ile Phe Val Ile Met Gly
 50 55 60
 Leu Ser Gly Ser Gly Lys Ser Thr Leu Leu Arg Cys Ile Asn Arg Leu
 65 70 75 80
 Ile Lys Pro Thr Ser Gly Glu Val Ile Ile Asn Gly Arg Asp Ile Ser
 85 90 95
 Asn Val Thr Asp Lys Glu Leu Leu Arg Ile Arg Arg Lys Glu Leu Ala
 100 105 110
 Met Val Phe Gln His Phe Gly Leu Leu Pro His Arg Ser Val Leu His
 115 120 125
 Asn Ile Ala Phe Gly Leu Glu Leu Gln Gly Val Lys Lys Gln Glu Arg
 130 135 140
 Glu Gln Arg Ala Met Glu Ser Met Gln Leu Val Gly Leu Lys Gly Tyr
 145 150 155 160
 Glu Asn Gln Met Val Gly Glu Leu Ser Gly Gly Met Gln Gln Arg Val
 165 170 175
 Gly Leu Ala Arg Ala Leu Ala Asn Asp Pro Glu Val Leu Leu Met Asp
 180 185 190
 Glu Ala Phe Ser Ala Leu Asp Pro Leu Ile Arg Ile Gln Met Gln Asp
 195 200 205
 Glu Leu Leu Thr Leu Gln Ser Lys Met Lys Lys Thr Ile Val Phe Ile
 210 215 220
 Thr His Asp Leu Asn Glu Ala Ile Lys Leu Gly Asp Arg Ile Ala Ile
 225 230 235 240
 Met Lys Asp Gly Glu Val Val Gln Val Gly Thr Ser Glu Glu Ile Leu
 245 250 255
 Thr Glu Pro Ala Asn Ala Tyr Val Glu Arg Phe Val Gln Ser Val Asp
 260 265 270
 Arg Ser Lys Ile Ile Thr Ala Ala Ser Val Met Val Asp Lys Pro Leu
 275 280 285
 Val Ala Arg Leu Lys Lys Glu Gly Pro Glu Val Leu Ile Arg Lys Met
 290 295 300
 Leu Glu Arg Asn Leu Thr Val Leu Pro Val Val Asp Val Asn Asn Val
 305 310 315 320
 Leu Val Gly Glu Val Arg Leu Lys Asp Leu Leu Arg Leu Arg Gln Asp
 325 330 335
 Gln Val Lys Ser Ile Glu Ser Val Val Arg Glu Glu Val His Ser Val
 340 345 350
 Leu Gly Asp Thr Ile Leu Glu Asp Ile Leu Pro Leu Met Thr Lys Thr
 355 360 365
 Asn Ser Pro Ile Trp Val Val Asn Glu Thr Arg Glu Phe Gln Gly Val
 370 375 380
 Val Pro Leu Ser Ser Leu Ile Tyr Glu Val Thr Gly Lys Asn Lys Gln
 385 390 395 400
 Glu Ile Asn Glu Ile Ile Gln Asn Ala Ile Glu Leu
 405 410

<210> 10305

<211> 102

<212> PRT

<213> B.fragilis

<400> 10305

Ala Leu Ala Gly Ser Val Arg Ile Ser Ser Glu Val Pro Thr Cys Thr
 1 5 10 15
 Thr Ser Pro Ser Phe Met Ile Ala Ile Arg Ser Pro Asn Leu Met Ala
 20 25 30
 Ser Phe Lys Ser Trp Val Ile Asn Thr Met Val Phe Phe Ile Leu Asp
 35 40 45
 Cys Lys Val Ser Asn Ser Ser Cys Ile Cys Met Arg Ile Lys Gly Ser
 50 55 60
 Arg Ala Glu Lys Ala Ser Ser Ile Ser Ser Thr Ser Gly Ser Leu Ala
 65 70 75 80
 Asn Ala Arg Ala Lys Pro Thr Arg Cys Cys Ile Pro Pro Asp Ser Ser
 85 90 95
 Pro Thr Ile Trp Phe Ser
 100

<210> 10306

<211> 192

<212> PRT

<213> B.fragilis

<400> 10306

His Gln Ile Leu Asn Ile Met Asp Tyr Glu Lys Leu Glu Gln Leu Lys
 1 5 10 15
 Arg Leu His Asp Ser Gly Ala Leu Asn Asp Glu Glu Phe Glu Lys Glu
 20 25 30
 Lys Lys Lys Ile Leu Asp Glu Glu Ala Thr Ala Lys Pro Thr Ala Val
 35 40 45
 Leu Pro Met Gly Leu Thr Glu Asn Ala Tyr Leu Ala Leu Met Asn Phe
 50 55 60
 Ala Met Phe Ile Pro Tyr Val Gly Trp Ile Ala Pro Ile Val Phe Trp
 65 70 75 80
 Ile Met Gly Lys Glu Asn Ser Ile Leu Val Asn Arg Gln Gly Lys Tyr
 85 90 95
 Ile Leu Asn Trp Tyr Ile Ser Trp Phe Leu Tyr Gly Ile Ala Leu Thr
 100 105 110
 Val Leu Phe Val Ile Phe Met Phe Ser Gly Ile Leu Ser Ile Asn Asp
 115 120 125
 Met Asp Tyr Ala Asn Asp Gln Thr Ser Pro Leu Ala Val Leu Leu Gly
 130 135 140
 Ile Phe Gly Gly Ala Gly Ile Leu Leu Leu Leu Ile Leu Gly Ile
 145 150 155 160
 Gly Cys Phe Leu Cys Leu Leu Phe Pro Ile Ile Gly Gly Ile Lys Gly
 165 170 175
 Leu Asn Gly Lys Thr Trp Lys Tyr Pro Leu Ser Ile Pro Phe Leu Lys
 180 185 190

<210> 10307

<211> 398

<212> PRT

<213> B.fragilis

<400> 10307

Leu Met Leu Met Thr Asn Leu Leu Tyr Leu Phe Asn Pro Asp Gln Asp
 1 5 10 15
 Leu Ala Leu Ala Ser Gly Glu Val Asn Tyr Met Pro Pro Ala Ser Ala
 20 25 30
 Arg Arg Met Ala Glu Glu Leu Ala Leu Leu Pro Val Trp Phe Ala Asp
 35 40 45
 Gly Pro Cys Ser Val Leu Ala Pro Ser Ala Tyr Asn Gln Ser Phe Leu
 50 55 60
 Glu Glu Met Leu Asp Leu Phe Pro Leu Pro Ala Ser Leu Arg Thr Gln
 65 70 75 80
 Ala Glu Asp Phe Ser Glu Val Arg Ser Val Val Pro Trp Gly Trp Asn
 85 90 95
 Pro Ala Leu Arg Lys Arg Leu Leu Ser Leu Gly Val Pro Asp Ala Ala
 100 105 110
 Leu Pro Ser Met Glu Asp Ile Gly Arg Leu Arg Asp Leu Ser His Arg
 115 120 125
 Leu Gln Ala Val Arg Leu Leu Ser Gly Leu Gln Val Asp Glu Val Phe
 130 135 140
 Cys Gly Glu Ser Cys Tyr Leu Thr Ala Leu Ser Asp Cys Arg Ala Phe
 145 150 155 160
 Val Glu Ser Leu Glu Arg Cys Leu Leu Lys Ala Pro Leu Ser Gly Ser
 165 170 175
 Gly Lys Gly Leu Asn Trp Cys Lys Gly Ala Phe Thr Pro Leu Ile Glu
 180 185 190
 Arg Trp Cys Ala Arg Val Ile Glu Gln Gln Gly Val Val Gly Glu
 195 200 205
 Pro Ile Tyr Asn Lys Val Glu Asp Phe Ala Met Glu Phe Tyr Ser Asp
 210 215 220
 Gly Lys Gly Arg Ile Ile Phe Ala Gly Tyr Ser Leu Phe Arg Thr Asn
 225 230 235 240
 Ala Gly Gly Ala Tyr Glu Gly Asn Arg Leu Leu Pro Asp Ala Glu Ile
 245 250 255
 Glu Arg Arg Leu Ser Ala Tyr Val Pro Val Ala Ala Leu His Arg Leu
 260 265 270
 Arg Glu Glu Leu Gln Arg Arg Leu Ser Val Ser Leu Gly Thr Glu Tyr
 275 280 285
 Ala Gly Tyr Leu Gly Val Asp Met Met Ile Cys Arg Phe Ala Leu Leu
 290 295 300
 Pro Glu Phe Arg Ile His Pro Cys Val Glu Ile Asn Leu Arg Met Asn
 305 310 315 320
 Met Gly Leu Val Ser Arg Met Leu Tyr Asp Arg Tyr Val Arg Pro Gly
 325 330 335
 Ala Gly Gly Thr Phe Arg Ile Ser Tyr His Pro Ser Asp Gly Gln Ala
 340 345 350
 Leu Gln Glu His Asp Ala Met Thr Val Ala His Pro Leu His Thr Arg
 355 360 365
 Asn Gly Arg Val Val Lys Gly Tyr Leu Pro Leu Val Pro Val Arg Lys
 370 375 380
 Ser Ser Arg Tyr Arg Ala Tyr Ile Leu Val Glu Thr Gly Gly
 385 390 395

<210> 10308

<211> 1193

<212> PRT

<213> B.fragilis

<400> 10308

Ile Thr Tyr Leu Asn Ile Ile Phe Ile Met Thr Lys Gln Lys Lys Phe
 1 5 10 15

Ile Thr Cys Asp Gly Asn Gln Ala Ala Ala His Ile Ser Tyr Met Phe
 20 25 30
 Ser Glu Val Ala Ala Ile Tyr Pro Ile Thr Pro Ser Ser Thr Met Ala
 35 40 45
 Glu Tyr Val Asp Glu Trp Ala Ala Ala Gly Arg Lys Asn Ile Phe Gly
 50 55 60
 Glu Thr Val Leu Val Gln Glu Met Gln Ser Glu Gly Gly Ala Ala Gly
 65 70 75 80
 Ala Val His Gly Ser Leu Gln Ala Gly Ala Leu Thr Thr Tyr Thr
 85 90 95
 Ala Ser Gln Gly Leu Leu Leu Met Ile Pro Asn Met Tyr Lys Ile Ala
 100 105 110
 Gly Glu Phe Leu Pro Cys Val Phe His Val Ser Ala Arg Thr Leu Ala
 115 120 125
 Ser His Ala Leu Cys Ile Phe Gly Asp His Gln Asp Val Met Ser Ala
 130 135 140
 Arg Gln Thr Gly Phe Ala Met Leu Ala Glu Gly Ser Val Gln Glu Val
 145 150 155 160
 Met Asp Leu Ala Gly Val Ala His Leu Ala Thr Ile Lys Ala Arg Val
 165 170 175
 Pro Phe Met Asn Phe Phe Asp Gly Phe Arg Thr Ser His Glu Ile Gln
 180 185 190
 Lys Ile Glu Met Leu Glu Asn Glu Asp Leu Ala Pro Leu Val Asp Gln
 195 200 205
 Glu Ala Leu Ala Glu Phe Arg Ala Arg Ala Leu Asn Pro Met Asn Pro
 210 215 220
 Val Ala Arg Gly Met Ala Glu Asn Pro Asp His Phe Phe Gln His Arg
 225 230 235 240
 Glu Ser Cys Asn Asn Tyr Tyr Glu Ala Val Pro Ala Ile Val Glu Glu
 245 250 255
 Tyr Met Asn Glu Ile Ser Lys Ile Thr Gly Arg Lys Tyr Gly Leu Phe
 260 265 270
 Asp Tyr Tyr Gly Ala Glu Asp Ala Glu Arg Val Ile Ile Ala Met Gly
 275 280 285
 Ser Val Thr Glu Ala Ala Arg Glu Ala Ile Asp Tyr Leu Thr Ser Gln
 290 295 300
 Gly Glu Lys Val Gly Leu Val Ala Val His Leu Tyr Arg Pro Phe Ser
 305 310 315 320
 Ala Lys His Phe Leu Ala Ala Val Pro Lys Thr Ala Lys Thr Ile Ala
 325 330 335
 Val Leu Asp Arg Thr Lys Glu Pro Gly Ala Asn Gly Glu Pro Leu Tyr
 340 345 350
 Leu Asp Val Lys Asp Cys Phe Tyr Gly Ala Glu Asn Ala Pro Val Ile
 355 360 365
 Val Gly Gly Arg Tyr Gly Leu Gly Ser Lys Asp Thr Thr Pro Ala Gln
 370 375 380
 Ile Ile Ala Val Phe Lys Asn Leu Ala Met Pro Met Pro Lys Asn His
 385 390 395 400
 Phe Thr Ile Gly Ile Val Asp Asp Val Thr Phe Thr Ser Leu Pro Gln
 405 410 415
 Glu Ala Glu Ile Ala Leu Gly Gly Glu Gly Met Phe Glu Ala Lys Phe
 420 425 430
 Tyr Gly Leu Gly Ala Asp Gly Thr Val Gly Ala Asn Lys Asn Ser Val
 435 440 445
 Lys Ile Ile Gly Asp Asn Thr Asp Lys His Cys Gln Ala Tyr Phe Ser
 450 455 460
 Tyr Asp Ser Lys Lys Ser Gly Gly Phe Thr Cys Ser His Leu Arg Phe
 465 470 475 480
 Gly Asp Asp Pro Ile Arg Ser Thr Tyr Leu Val Asn Thr Pro Asn Phe

485	490	495
Val Ala Cys His Val Gln Ala Tyr Leu His Met Tyr Asp Val	Thr Arg	
500	505	510
Gly Leu Arg Lys Asn Gly Ser Phe Leu Leu Asn Thr Ile Trp Glu Gly		
515	520	525
Glu Glu Leu Ala Lys Asn Leu Pro Asn Lys Val Lys Lys Tyr Phe Ala		
530	535	540
Gln Asn Asn Ile Ser Val Tyr Tyr Ile Asn Ala Thr Gln Ile Ala Gln		
545	550	555
Glu Ile Gly Leu Gly Asn Arg Thr Asn Thr Ile Leu Gln Ser Ala Phe		
565	570	575
Phe Arg Ile Thr Gly Val Ile Pro Val Asp Gln Ala Val Glu Gln Met		
580	585	590
Lys Lys Phe Ile Val Lys Ser Tyr Gly Lys Lys Gly Glu Asp Val Val		
595	600	605
Asn Lys Asn Tyr Ala Ala Val Asp Arg Gly Gly Glu Tyr Lys Thr Leu		
610	615	620
Thr Val Asp Pro Ala Trp Ala Asn Leu Pro Asp Asp Ala Lys Val Glu		
625	630	635
Asn Asn Asp Pro Ala Phe Ile Asn Glu Val Val Arg Pro Ile Asn Ala		
645	650	655
Gln Asp Gly Asp Leu Leu Pro Val Ser Ala Phe Lys Gly Ile Glu Asp		
660	665	670
Gly Thr Trp Tyr Gln Gly Thr Ser Lys Tyr Glu Lys Arg Gly Val Ala		
675	680	685
Ala Phe Val Pro Glu Trp Asn Ala Glu Asn Cys Ile Gln Cys Asn Lys		
690	695	700
Cys Ala Tyr Val Cys Pro His Ala Ser Ile Arg Pro Phe Val Leu Asp		
705	710	715
Ala Glu Glu Gln Lys Gly Ala Asn Phe Glu Met Leu Lys Ala Val Gly		
725	730	735
Lys Gln Phe Asp Gly Met Thr Phe Arg Ile Gln Val Asp Val Leu Asp		
740	745	750
Cys Leu Gly Cys Gly Asn Cys Ala Asp Ile Cys Pro Gly Asn Pro Lys		
755	760	765
Lys Gly Lys Ala Leu Thr Met Lys His Leu Glu Ser Gln Leu Ala		
770	775	780
Gln Ala Asp Asn Trp Thr Tyr Cys Ala Asp Asn Val Lys Ser Lys Gln		
785	790	795
His Leu Val Asp Ile Lys Ala Asn Val Lys Asn Ser Gln Phe Ala Thr		
805	810	815
Pro Leu Phe Glu Phe Ser Gly Ala Cys Ser Gly Cys Gly Glu Thr Pro		
820	825	830
Tyr Val Lys Leu Ile Ser Gln Leu Tyr Gly Asp Arg Glu Met Val Ala		
835	840	845
Asn Ala Thr Gly Cys Ser Ser Ile Tyr Ser Gly Ser Val Pro Ser Thr		
850	855	860
Pro Tyr Thr Thr Asn Ala Lys Gly His Gly Pro Ala Trp Ala Asn Ser		
865	870	875
Leu Phe Glu Asp Phe Cys Glu Phe Gly Leu Gly Met Glu Leu Ala Asn		
885	890	895
Glu Lys Met Arg Ala Arg Ile Val Lys Leu Phe Asn Glu Ile Leu Ala		
900	905	910
Ala Asp Asn Ala Pro Ala Glu Ala Lys Glu Val Leu Lys Ala Trp Ile		
915	920	925
Glu Asn Met Tyr Asp Ala Asp Lys Thr Lys Glu Leu Ala Pro Gln Ile		
930	935	940
Glu Ala Ile Ile Glu Gln Gly Ile Ala Ala Gly Cys Pro Ile Ser Lys		
945	950	955
		960

Glu Leu Lys Gly Leu Thr Gln Tyr Leu Val Lys Arg Ser Gln Trp Ile
 965 970 975
 Ile Gly Gly Asp Gly Ala Ser Tyr Asp Ile Gly Tyr Gly Gly Leu Asp
 980 985 990
 His Val Ile Ala Ser Gly Lys Asp Val Asn Ile Leu Val Leu Asp Thr
 995 1000 1005
 Glu Val Tyr Ser Asn Thr Gly Gly Gln Ser Ser Lys Ala Thr Pro Val
 1010 1015 1020
 Gly Ala Ile Ala Lys Phe Ala Ala Ser Gly Lys Arg Val Arg Lys Lys
 1025 1030 1035 1040
 Asp Leu Gly Leu Met Ala Thr Thr Tyr Gly Tyr Val Tyr Val Ala Gln
 1045 1050 1055
 Ile Ala Met Gly Ala Asp Gln Ala Gln Thr Leu Lys Ala Ile Arg Glu
 1060 1065 1070
 Ala Glu Ala Tyr Pro Gly Pro Ser Leu Ile Ile Ala Tyr Ala Pro Cys
 1075 1080 1085
 Ile Asn His Gly Leu Lys Ala Gly Met Gly Lys Ser Gln Glu Glu Glu
 1090 1095 1100
 Glu Lys Ala Val Lys Cys Gly Tyr Trp His Leu Trp Arg Tyr Asn Pro
 1105 1110 1115 1120
 Ala Leu Glu Ala Glu Gly Lys Asn Pro Phe Thr Leu Asp Ser Lys Glu
 1125 1130 1135
 Pro Asn Trp Asp Asp Phe Lys Gly Phe Leu Lys Gly Glu Val Arg Tyr
 1140 1145 1150
 Ala Ser Val Met Lys Gln Tyr Pro Ala Glu Ala Glu Glu Leu Phe Gln
 1155 1160 1165
 Ala Ala Glu Asp Asn Ala Lys Trp Arg Tyr Asn Asn Tyr Lys Arg Leu
 1170 1175 1180
 Ala Asn Gln Ala Trp Gly Ala Ala Glu
 1185 1190

<210> 10309

<211> 281

<212> PRT

<213> B.fragilis

<400> 10309

Gln Leu Ser Leu Arg Met Leu Arg Pro Asn Arg Ala Tyr Thr Leu Val
 1 5 10 15
 Ala Asn Thr Gly Lys Gln Ile Arg Tyr Gly Glu Leu Phe Asn Arg Leu
 20 25 30
 Ser Gly Tyr Asp Val Ile Phe Leu Gly Glu Leu His Asn Cys Pro Ile
 35 40 45
 Thr His Trp Leu Glu Phe Glu Ile Thr Arg Ser Ile Tyr Asn Ile His
 50 55 60
 Lys Asp Gln Leu Met Leu Gly Ala Glu Met Phe Glu Ser Asp Asn Gln
 65 70 75 80
 Leu Ile Phe Asp Glu Tyr Met Gln Gln Lys Ile Ser Tyr Asp Arg Phe
 85 90 95
 Glu Ala Glu Ala Arg Leu Trp Asp Asn Tyr Arg Thr Asp Tyr Tyr Pro
 100 105 110
 Val Val Phe Phe Ala Lys Glu His His Ile Pro Phe Ile Ala Thr Asn
 115 120 125
 Ile Pro Arg Arg Tyr Ala Asn Ile Val Lys Asn Lys Gly Phe Glu Ala
 130 135 140
 Leu Asp Ser Leu Ser Glu Glu Ala Lys Arg Tyr Ile Ala Pro Leu Pro
 145 150 155 160
 Ile Asp Phe Glu Tyr Asp Glu Ala Gln Ser Ala Ala Ala Phe Ser Met
 165 170 175

Met Asn Met Met Gly Gly Arg Arg Ala Gly Asp Asn Arg Lys Leu Ala
 180 185 190
 Gln Ala Gln Ala Ile Lys Asp Ala Thr Met Gly Trp Phe Ile Ala Arg
 195 200 205
 Asn Ile Lys Asn Lys Phe Leu His Ile Asn Gly Ser Tyr His Ser Asn
 210 215 220
 Arg Gln Gly Gly Ile Ile Pro Tyr Leu Leu Arg Tyr Arg Pro Asn Thr
 225 230 235 240
 Ser Ile Val Thr Val Ser Val Arg Gln Glu Ser Ile Arg Lys Arg
 245 250 255
 Leu His Asn Gly Asp Gly Arg Phe Asn Ser Pro Arg Asp Ser Ser Ser
 260 265 270
 Leu Val Lys Thr Lys Thr Gly Thr Tyr
 275 280

<210> 10310

<211> 280

<212> PRT

<213> B.fragilis

<400> 10310

Ser Ser Leu Arg His Arg Gly Ser Phe Gln Pro Arg Gly Glu Asp Ser
 1 5 10 15
 Asp Thr Lys Asn Pro Ala Val Ala Ala Gly Thr Thr Leu Leu Phe
 20 25 30
 Gly Val Pro Asn Ile Ile Ser Glu Gln Lys Gln Thr Gln Asp Leu Thr
 35 40 45
 Gly Tyr Arg Pro Arg Lys Ala His Thr Tyr Asp Tyr Ala Gln Thr Lys
 50 55 60
 Gly Asp Glu Leu Leu Gly Thr Asn Ala Cys Val Val Phe Arg Ser Ala
 65 70 75 80
 Glu Ala Asn Leu Asn Tyr Met Glu Ala Cys Tyr Glu Lys Thr Gly Ser
 85 90 95
 Leu Asp Ala Lys Ala Gln Lys Tyr Trp Lys Ala Leu Arg Thr Arg Ala
 100 105 110
 Gly Val Asp Asp Asp Tyr Ala Lys Thr Ile Ala Ala Thr Asp Leu Ser
 115 120 125
 Lys Glu Asn Asp Leu Ala Val Tyr Ser Gly Ser Lys Met Val Asp Val
 130 135 140
 Thr Leu Tyr Asn Ile Arg Arg Glu Arg Arg Cys Glu Phe Ile Gly Glu
 145 150 155 160
 Gly Met Arg Trp Asp Asp Leu Lys Arg Trp Arg Ser Trp Asp Gln Leu
 165 170 175
 Leu Thr Lys Pro Tyr Ile Ile Glu Gly Ile Asn Phe Trp Asp Ala Ala
 180 185 190
 Tyr Lys Asp His Lys Asp Ile Lys Asp Asp Gly Thr Leu Asp Ala Asn
 195 200 205
 Val Ser Pro Lys Ser Asp Ser Lys Tyr Leu Arg Pro Leu Arg Arg Thr
 210 215 220
 Ser Ile Asn Asn Glu Leu Tyr Asp Gly Leu Thr Trp Arg Lys Ala Phe
 225 230 235 240
 Tyr Leu Asp Pro Ile Gly Ile Glu Asp Met Ser Leu Thr Ala Thr Asn
 245 250 255
 Pro Glu Asp Ile Asn Thr Thr Gln Leu Tyr Gln Asn Pro Tyr Trp Pro
 260 265 270
 Met Thr Ala Gly Lys Ala Leu Glu
 275 280

<210> 10311

<211> 617
 <212> PRT
 <213> B.fragilis

<400> 10311

Ser Leu Ser His Tyr Ser Gly Glu Gly Ser Leu Leu Lys Arg Asn Ile
 1 5 10 15
 Glu Met Lys Lys Gln Leu Arg Ser Ser Phe Ser Thr Gln Gly Arg Arg
 20 25 30
 Met Ala Gly Ala Arg Ala Leu Trp Ala Ala Asn Gly Met Lys Lys Glu
 35 40 45
 Gln Leu Gly Lys Pro Ile Ile Ala Ile Val Asn Ser Phe Thr Gln Phe
 50 55 60
 Val Pro Gly His Val His Leu His Glu Ile Gly Gln Leu Val Lys Lys
 65 70 75 80
 Glu Ile Glu Lys Leu Gly Cys Phe Ala Ala Glu Phe Asn Thr Ile Ala
 85 90 95
 Ile Asp Asp Gly Ile Ala Met Gly His Asp Gly Met Leu Tyr Ser Leu
 100 105 110
 Pro Ser Arg Asp Ile Ile Ala Asp Ser Val Glu Tyr Met Val Asn Ala
 115 120 125
 His Lys Ala Asp Ala Met Val Cys Ile Ser Asn Cys Asp Lys Ile Thr
 130 135 140
 Pro Gly Met Leu Met Ala Ala Met Arg Leu Asn Ile Pro Thr Val Phe
 145 150 155 160
 Val Ser Gly Gly Pro Met Glu Ala Gly Glu Leu Asp Gly Gln His Leu
 165 170 175
 Asp Leu Ile Asp Ala Met Ile Lys Ser Ala Asp Glu Ser Val Ser Asp
 180 185 190
 Glu Glu Val Ser Lys Ile Glu Asn Arg Ala Cys Pro Thr Cys Gly Cys
 195 200 205
 Cys Ser Gly Met Phe Thr Ala Asn Ser Met Asn Cys Leu Asn Glu Ala
 210 215 220
 Ile Gly Leu Ala Leu Pro Gly Asn Gly Thr Ile Val Ala Thr His Ala
 225 230 235 240
 Asn Arg Thr Gln Leu Phe Lys Asp Ala Ala Lys Leu Ile Val Glu Asn
 245 250 255
 Thr Tyr Lys Tyr Tyr Arg Asp Gly Asp Glu Ser Val Leu Pro Arg Ser
 260 265 270
 Ile Ala Thr Arg Glu Ala Phe Leu Asn Ala Met Thr Leu Asp Ile Ala
 275 280 285
 Met Gly Gly Ser Thr Asn Thr Val Leu His Leu Leu Ala Ile Ala His
 290 295 300
 Glu Ala Glu Ala Asp Phe Lys Met Asp Asp Ile Asp Met Leu Ser Arg
 305 310 315 320
 Lys Ser Pro Cys Leu Cys Lys Val Ala Pro Asn Thr Gln Lys Tyr His
 325 330 335
 Ile Gln Asp Val Asn Arg Ala Gly Gly Ile Met Gly Ile Met Gly Gln
 340 345 350
 Leu Ala Lys Ser Gly Leu Ile Asp Thr Ser Val Val Arg Ile Asp Gly
 355 360 365
 Met Thr Leu Gly Glu Ala Ile Asp Lys Tyr Asp Ile Thr Ser Pro Asn
 370 375 380
 Val Cys Glu Glu Ala Ile Lys Lys Tyr Lys Ser Ala Ala Ala Gly Lys
 385 390 395 400
 Phe Asn Leu Val Leu Gly Ser Gln Asp Val Tyr Tyr Lys Glu Leu Asp
 405 410 415
 Thr Asp Arg Ala Glu Gly Cys Ile Arg Asp Ile Glu His Ala Tyr Ser
 420 425 430

Lys Asp Gly Gly Leu Ala Val Leu Lys Gly Asn Ile Ala Gln Asp Gly
 435 440 445
 Cys Val Val Lys Thr Ala Gly Val Asp Glu Ser Ile Trp Lys Phe Thr
 450 455 460
 Gly Pro Ala Lys Val Phe Asp Ser Gln Glu Ala Ala Cys Asn Gly Ile
 465 470 475 480
 Leu Gly Gly Lys Val Val Ser Gly Asp Val Val Val Ile Thr His Glu
 485 490 495
 Gly Pro Lys Gly Pro Gly Met Gln Glu Met Leu Tyr Pro Thr Ser
 500 505 510
 Tyr Ile Lys Ser Arg His Leu Gly Lys Glu Cys Ala Leu Ile Thr Asp
 515 520 525
 Gly Arg Phe Ser Gly Gly Thr Ser Gly Leu Ser Ile Gly His Ile Ser
 530 535 540
 Pro Glu Ala Ala Ala Gly Gly Asn Ile Gly Lys Ile Lys Asp Gly Asp
 545 550 555 560
 Ile Ile Glu Ile Asn Ile Pro Glu Arg Thr Ile Asn Val Arg Leu Thr
 565 570 575
 Asp Glu Glu Leu Ala Ala Arg Pro Met Thr Pro Val Thr Arg Glu Arg
 580 585 590
 Tyr Val Pro Lys Ser Leu Lys Ala Tyr Ala Ser Met Val Ser Ser Ala
 595 600 605
 Asp Lys Gly Ala Val Arg Leu Ile Asp
 610 615

<210> 10312

<211> 569

<212> PRT

<213> B.fragilis

<400> 10312

Tyr Met Ser Lys Asp Ile Ile Ser Gly Gly Glu Ala Leu Met Arg Ser
 1 5 10 15
 Leu Glu Tyr His Gly Val Lys Thr Ile Phe Gly Tyr Pro Gly Gly Ser
 20 25 30
 Ile Met Pro Val Phe Asp Ala Leu Tyr Asp His Arg Glu Thr Leu Asn
 35 40 45
 His Ile Leu Val Arg His Glu Gln Gly Ala Ala His Ala Ala Gln Gly
 50 55 60
 Phe Ala Arg Ala Ser Gly Glu Val Gly Val Cys Leu Val Thr Ser Gly
 65 70 75 80
 Pro Gly Ala Thr Asn Thr Ile Thr Gly Ile Ala Asp Ala Met Ile Asp
 85 90 95
 Ser Thr Pro Ile Val Val Ile Ala Gly Gln Val Gly Thr Ala Phe Leu
 100 105 110
 Gly Thr Asp Ala Phe Gln Glu Val Asp Leu Val Gly Ile Thr Gln Pro
 115 120 125
 Ile Thr Lys Trp Ser Tyr Gln Ile Arg Arg Ala Glu Asp Val Pro Trp
 130 135 140
 Ala Val Ala Arg Ala Phe Tyr Ile Ala Lys Ser Gly Arg Pro Gly Pro
 145 150 155 160
 Val Val Leu Asp Phe Ala Lys Asn Ala Gln Val Glu Lys Ala Glu Tyr
 165 170 175
 Met Pro Ala Lys Leu Asp Phe Ile Arg Ser Tyr Val Pro Val Pro Glu
 180 185 190
 Thr Asp Pro Glu Ala Val Lys Ala Ala Ala Glu Leu Ile Asn Gly Ala
 195 200 205
 Glu Arg Pro Leu Val Leu Val Gly Gln Gly Val Glu Leu Gly Asn Ala
 210 215 220

Gln Gln Glu Leu Arg Ala Phe Ile Glu Lys Ala Asp Met Pro Ala Gly
 225 230 235 240
 Cys Thr Leu Leu Gly Leu Ser Ala Leu Pro Thr Glu His Pro Leu Asn
 245 250 255
 Lys Gly Met Leu Gly Met His Gly Asn Leu Gly Pro Asn Met Asn Thr
 260 265 270
 Asn Lys Cys Asp Val Leu Ile Ala Val Gly Met Arg Phe Asp Asp Arg
 275 280 285
 Val Thr Gly Asn Leu Ala Thr Tyr Ala Lys Gln Ala Lys Val Ile His
 290 295 300
 Phe Asp Ile Asp Pro Ala Glu Ile Asn Lys Asn Val His Ala Asp Val
 305 310 315 320
 Ala Gly Leu Gly Asn Cys Lys Glu Thr Leu Ser Ala Val Thr Ala Leu
 325 330 335
 Leu Gln Pro Asn Glu His Lys Glu Trp Leu Asp Ser Phe Leu Pro Tyr
 340 345 350
 Glu Gln Val Glu Glu Glu Lys Val Ile Arg Pro Glu Leu His Pro Met
 355 360 365
 Gly Asp Thr Leu Ser Met Gly Glu Val Val Arg Ala Val Ser Asp Ala
 370 375 380
 Thr Asn His Glu Ala Ile Leu Val Thr Asp Val Gly Gln Asn Gln Met
 385 390 395 400
 Met Ser Ala Arg Tyr Phe Lys Tyr Ser Lys Asp Arg Ser Met Ile Thr
 405 410 415
 Ser Gly Gly Leu Gly Thr Met Gly Phe Gly Leu Pro Ala Ala Ile Gly
 420 425 430
 Ala Thr Phe Gly Arg Pro Asp Arg Thr Val Cys Val Phe Met Gly Asp
 435 440 445
 Gly Gly Leu Gln Met Asn Ile Gln Glu Leu Gly Thr Ile Met Glu Gln
 450 455 460
 Lys Ala Pro Val Lys Ile Ile Val Ser Asn Asn Asn Phe Leu Gly Asn
 465 470 475 480
 Val Arg Gln Trp Gln Ala Met Phe Phe Asn Arg Lys Tyr Ser Phe Thr
 485 490 495
 Pro Met Leu Asn Pro Asp Tyr Ile Lys Ile Ala Ser Ala Tyr Asp Ile
 500 505 510
 Pro Ala Lys Arg Val Phe Thr Arg Glu Glu Leu Ala Asp Ala Ile Asp
 515 520 525
 Glu Met Ile Ala Thr Asp Gly Pro Phe Leu Leu Glu Ala Cys Val Ile
 530 535 540
 Glu Lys Gly Asn Val Leu Pro Met Thr Pro Pro Gly Gly Ser Phe Asn
 545 550 555 560
 Pro Met Leu Val Gly Met Leu Ile Ser
 565

<210> 10313

<211> 235

<212> PRT

<213> B.fragilis

<400> 10313

Asp Gly Ser Arg Tyr Val Met Ala Ala Asp Gly Ala Asp Gly Leu Val
 1 5 10 15
 Asn Gly Thr Val Cys Gly Leu Lys Ala Ser Leu Ala Val Asp Val Gln
 20 25 30
 Gly Tyr Ala Tyr Arg Val Val Lys Ile Gly Ser Leu Tyr Trp Met Gly
 35 40 45
 Glu Asn Leu Lys Thr Thr Gln Phe Asn Asp Gly Thr Pro Ile Pro Thr
 50 55 60

Gly Phe Ala Thr Ser Met Asp Trp Gly Ile Gln Cys Gly Lys Gly Leu
 65 70 75 80
 Pro Ala Cys Gln Val Asp Arg Ala Val Asn Ala Asn Ala Pro Gly Ala
 85 90 95
 Met Gln Tyr Arg Asn Leu Tyr Gly Val Leu Tyr Asn Gln Phe Ala Met
 100 105 110
 Lys Gly Asn Ile Ala Pro Gln Gly Trp His Val Pro Ser Lys Ala Glu
 115 120 125
 Leu Gln Ala Leu Val Asp Phe Val Gly Ala Asp Ala Arg Lys Leu Lys
 130 135 140
 Ser Thr Ala Val Gly Lys Gly Ile Gly Asn Trp Leu Glu Asp Thr Gly
 145 150 155 160
 Ile Glu Ala Asn Asn Leu Thr Gly Phe Thr Ala Leu Pro Ala Asn Thr
 165 170 175
 Val Asn Gly Gly Asn Gly Ser Thr Gly Ala Gln Glu Thr Thr Gly Gln
 180 185 190
 Trp Trp Ser Thr Glu Thr Ser Tyr Arg Ile Arg Met Ser Tyr Lys Ser
 195 200 205
 Asn Ser Val Glu Leu Leu Thr Ser Gly Asn Ala Leu Ala Gly Glu Gly
 210 215 220
 Asn Ser Ile Arg Cys Val Arg Asp Ala Asn Tyr
 225 230 235

<210> 10314

<211> 80

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (80)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10314

Pro Asn Val Gly Trp Asn Ala Asn Lys Leu Gly Ile Met Asp Lys Thr
 1 5 10 15
 Leu Cys Leu Ser His Gly Ala Trp Lys Asp Pro Pro Leu Ala Leu Ser
 20 25 30
 Met Ala Ile Ala Cys Phe Trp Cys Glu Asn Trp Tyr Ser Val His Asn
 35 40 45
 Ser His Pro Ile Ile Thr Asn Ser Glu Asn Ile Lys Met Tyr Lys Pro
 50 55 60
 Cys Gly Cys Pro Asn Gly Val Asn Pro Thr Leu Thr Ile Ile Cys Xaa
 65 70 75 80

<210> 10315

<211> 718

<212> PRT

<213> B.fragilis

<400> 10315

Leu Leu Ala Met Arg Trp Arg Val Lys Val Thr Ala Phe Val Val Ser
 1 5 10 15
 Gly Met Gln Ile Ile Asn Leu Thr Leu Met Asn Met Asn His Ile Ile
 20 25 30
 Lys Leu Leu Phe Leu Cys Leu Phe Phe Ala Thr Ala Cys Ser Gln Glu
 35 40 45
 Glu Met Asn Glu Val Leu Lys Asn His Ala Glu Met Glu Gly Gln Val
 50 55 60

Asn Ser Ile Glu Glu Leu Cys Lys Asn Met Asn Arg Asp Ile Val Ala
 65 70 75 80
 Leu Lys Leu Ile Ile Asn Ser Ser Glu Ser Gly Asp Tyr Ile Thr Gly
 85 90 95
 Phe Lys Glu Leu Ala Asp Gly Ser Gly Tyr Thr Ile Ser Phe Phe Lys
 100 105 110
 Ser Gly Thr Ile Val Ile Lys Asn Gly Glu Lys Gly Asp Asp Gly Lys
 115 120 125
 Lys Gly Glu Asp Gly Gln Asp Gly Gln Asn Gly Gln Asn Gly Thr Asp
 130 135 140
 Gly Lys Asp Gly Gln Asp Gly Thr Asp Gly Lys Asp Gly Gln Asp Gly
 145 150 155 160
 Ile Asp Gly Gln Asp Gly Gln Asp Gly Thr Asp Gly Lys Asp Gly Gln
 165 170 175
 Asp Gly Thr Asp Gly Lys Asp Gly Gln Asp Gly Thr Asp Gly Lys Asp
 180 185 190
 Gly Gln Asp Gly Thr Asp Gly Thr Asp Gly Pro Glu Gly Asp Lys Gly
 195 200 205
 Gln Asn Gly Thr Ala Pro Val Val Thr Met Lys Met Asp Thr Asp Gly
 210 215 220
 His Leu Tyr Trp Ala Ile Lys Asn Ala Asp Gly Thr Ser Ser Phe Leu
 225 230 235 240
 Leu Asp Asn Asn Gly Gln Lys Val Arg Ala Ser Gly Thr Asp Gly Ile
 245 250 255
 Val Pro Val Ile Gly Val Asn Ala Ala Gly Tyr Trp Thr Leu Asp Tyr
 260 265 270
 Gly Ser Gly Pro Val Glu Leu Lys Asp Ala Ala Gly Asn Pro Met Lys
 275 280 285
 Ala Lys Gly Ala Ser Gly Asp Pro Met Phe Arg Lys Val Val Ser Glu
 290 295 300
 Asp Gly Tyr Ile Val Phe Tyr Leu Thr Asp Gly Thr Ile Phe Lys Val
 305 310 315 320
 Pro Glu Trp Gly Gly Ala Gln Val Glu Leu Ala Ala Ser Gly Val Thr
 325 330 335
 Tyr Phe His Arg Ser Glu Ser Leu Thr Phe Thr Phe Thr Cys Ser Gly
 340 345 350
 Val Asn Lys Ser Ile Ala Pro Val Cys Thr Ala Pro Val Gly Trp Thr
 355 360 365
 Val Thr Ala Gln Tyr Thr Ser Asp Thr Thr Gly Glu Met Thr Val Ile
 370 375 380
 Ala Pro Asp Lys Ser Ser Ala Asp Gly Ala Leu Ser Gly Thr Ala Ile
 385 390 395 400
 Leu Glu Leu Thr Ala Lys Asp Gly Lys Lys Leu Ser Ala Thr Leu Gly
 405 410 415
 Val Thr Leu Leu Glu Phe Lys Val Pro Asp Ser Ser Arg Ser Phe
 420 425 430
 Val Tyr Glu Leu Tyr Val Glu Gly Val Lys Val Gly Glu Leu Cys His
 435 440 445
 Glu Phe Ile Pro Asp Tyr Ser Phe Gly Ser Gly Lys Ser Ala Ser Val
 450 455 460
 Phe Tyr Pro Tyr Asn Val Tyr Asn Lys Ala Phe Gly Glu Gly Met Val
 465 470 475 480
 Leu Asp Asn Gly Gly Lys Val Asp Tyr Leu Thr Thr Val Tyr Thr Pro
 485 490 495
 Gly Thr Asn Thr Gln Pro Phe Thr Ser Leu Phe Thr Glu Asp Gly Val
 500 505 510
 Ser Phe Ile Thr Gly Asp Tyr Ile Gly Tyr Ser Asp Ser Gln Ala Asn
 515 520 525
 Gly Leu Arg Pro Tyr Leu Thr Thr Asp Asn Glu Gly Asn Ser Tyr Arg

530	535	540
Val Met Lys Ile Gly Thr Gln Tyr Trp Met Ala Asp Asn Leu Arg Thr		
545 550 555 560		
Ile Thr Asn Ser Ala Gly Val Ile Ser Ser Glu Trp Arg Lys Asp Ala		
565 570 575		
Asn Pro Arg Tyr Ala Val Tyr Gly Phe Pro Ala Gly Ile Thr Glu Asp		
580 585 590		
Ser Arg Thr Ile Arg Asn Gln Tyr Gly Leu Leu Tyr Asn Ala Gly Val		
595 600 605		
Phe Ser Gly Ser Thr Ser Leu Val Thr Glu Gly Trp Lys Ile Pro Asn		
610 615 620		
His Leu Gly Asp Trp Asp Lys Leu Arg Asn Phe Leu Gly Gly Asp Ser		
625 630 635 640		
Lys Val Ala Glu Ala Leu Ser Ile Ala Gly Phe Val Gly Lys Pro Gly		
645 650 655		
Gly Arg Arg Asn Ala Asp Glu Pro Phe Ala Phe Gln Glu Lys Asp Glu		
660 665 670		
Val Gly Tyr Trp Trp Phe Ser Ser Val Asp Gly His Asn Cys Trp Ala		
675 680 685		
Leu Ser Ile Asn Pro Ser Asn Val Ser Val Pro Gln Ser Thr Asn Thr		
690 695 700		
Tyr Ser Arg Gly Tyr Gly Phe Ser Ile Arg Phe Ile Arg Gln		
705 710 715		

<210> 10316

<211> 397

<212> PRT

<213> B.fragilis

<400> 10316

Leu Ile Ile Val Asn Met Lys Asn Ile Ile Gly Ile Leu Gly Val Phe		
1 5 10 15		
Ile Leu Ala Ile Ser Cys Ser Gly Gly Lys Lys Glu Ser Ala Asp Ala		
20 25 30		
Gly Leu Glu Leu Thr Glu Asp Ser Val Val Tyr Leu Leu Ala Asp Asn		
35 40 45		
Val Thr Leu Gly Ile Lys Ala Leu Phe Pro Phe Ile Asp Lys Asp Gly		
50 55 60		
His Glu Tyr Leu Thr Phe Gln Asn Gln Leu Glu Pro Glu Ile Cys Val		
65 70 75 80		
Tyr Asp Leu Gln Ser Gly Glu Phe Val Lys Ser Ile Phe Phe Asp Arg		
85 90 95		
Glu Gly Ala Asn Gly Val Gly Met Phe Gly Gly Tyr His Ile Ile Asp		
100 105 110		
Phe Asp Glu Ile Tyr Leu Pro Ser Leu Gln Gln Ser Lys Val Phe Val		
115 120 125		
Met Glu Glu Ser Gly Lys Lys Arg Glu Ile Ile Thr Glu Lys Thr		
130 135 140		
Asp Asp Gly Ile Pro Leu Leu Pro Phe Gly Ala Ile Thr Phe Ala Tyr		
145 150 155 160		
Arg Pro Ile Tyr Phe Asn Asn Arg Lys Met Tyr Ile Pro Gln Thr Ile		
165 170 175		
Asn Met Arg Leu Gly Asn Lys Val Met Glu Lys Ser Pro Val Tyr Val		
180 185 190		
Val Val Asp Thr Val Lys Asn Val Leu Ser Pro Phe Pro Ile Lys Phe		
195 200 205		
Pro Pro Ile Met Ser Ser Asp Asp Val Thr Lys Pro Ser Leu Gly Asn		
210 215 220		
Glu Leu Ser Tyr Ser Cys Cys Leu Asn Asp Lys Asp Gln Phe Val Phe		

225	230	235	240
Ser Phe Phe Phe Asp Glu Asp Ile Tyr Val Val Ser Leu Gln Asp Gly			
245	250	255	
Glu Met Lys Lys Ile Lys Val Lys Ser Arg Tyr Ile Asp Lys Pro Ala			
260	265	270	
Ile Lys Glu Asn Pro Pro Gln Asp Phe Asp Gly Ala Met Lys Ala Ser			
275	280	285	
Ser Glu Ile Pro Cys Tyr Gly Asn Leu Ile Tyr Asp Lys Tyr Arg Lys			
290	295	300	
Val Tyr Tyr Arg Phe Val Tyr Leu Lys Thr Asp Leu Asp Gly Glu Lys			
305	310	315	320
Asn Tyr Leu Asn Ile Trp Gln Tyr Gly Arg Lys Ser Phe Ser Ile Met			
325	330	335	
Ile Leu Asn Glu Asp Phe Asp Val Ile Gly Glu Thr Arg Phe Pro Asp			
340	345	350	
Phe Thr Tyr Ile Ser Thr Leu His Tyr Ile Gly Lys Asp Gly Leu Tyr			
355	360	365	
Leu Ser Asp Ser His Tyr Lys Asn Pro Ser Phe Asp Glu Asn Lys Leu			
370	375	380	
Arg Phe Arg Arg Phe Lys Leu Val His Tyr Asn Lys Lys			
385	390	395	

<210> 10317

<211> 305

<212> PRT

<213> B.fragilis

<400> 10317

Arg Tyr Ser Lys Thr Leu Lys Thr Leu Leu Tyr Ile Leu Val Phe Ser			
1	5	10	15
Leu Cys Tyr Thr Asn Ala Tyr Cys Gln Ser Ile Pro Arg Glu Val Thr			
20	25	30	
Leu Asp Glu Val Ile Asn Arg Leu Ser Leu Glu Ser Ser Ser Ala Lys			
35	40	45	
Ile Glu Leu Leu Asn Phe Gln Asn Asp Leu Leu Arg Tyr Glu Asn Tyr			
50	55	60	
Lys Lys Ser Phe Leu Pro Ala Phe Val Leu Asn Phe Asn Pro Ile Asn			
65	70	75	80
Phe Asn Arg Ser Leu Arg Leu Leu Gln Gln Pro Ile Asp Gly Ser Tyr			
85	90	95	
Ser Tyr Val Glu Asp Asn Ser Asn Asn Thr Asn Phe Gly Thr Thr Val			
100	105	110	
Arg Gln Lys Ile Ser Ile Thr Gly Gly Glu Leu Ser Ile Gly Ser Asn			
115	120	125	
Ile Asn Tyr Leu Asn Glu Phe Ser Arg Lys Gln Asn Ser Phe Ser Thr			
130	135	140	
Asn Pro Phe Phe Ile Ser Tyr Ser Gln Gln Leu Trp Gly Gly Lys			
145	150	155	160
Leu Gln Arg Leu Glu Asn Lys Ile Glu Arg Ala Lys Asn Glu Val Ala			
165	170	175	
Val Lys Gln Tyr Cys Ser Asn Ile Ala Gln Ile Gln Gln Ala Leu			
180	185	190	
Thr Leu Tyr Leu Ser Ala Ile Leu Ser Lys Met Asp Ser Glu Leu Ala			
195	200	205	
Ile Asp Ile Lys Gln Ser Asn Asp Thr Leu Leu His Ile Ala Glu Ile			
210	215	220	
Lys Leu Arg Asn Gly Ser Ile Thr Glu Tyr Asp Tyr Lys Gln Met Glu			
225	230	235	240
Leu Gln Ser Leu Asn Leu Gln Tyr Met Tyr Glu Asn Ala Val Lys His			

245	250	255
Tyr Ala Glu Ser Ile Gln Lys Leu Phe Thr Phe Leu Gly Ile Glu Asn		
260	265	270
Asn Ala Glu Ile Thr Ile Pro Asp Phe Asp Leu Pro Leu Thr Ile Asp		
275	280	285
Ala Arg Leu His His Gly Gly Arg Ile Ser Ala His Val Ser Leu		
290	295	300
Thr		
305		

<210> 10318

<211> 83

<212> PRT

<213> B.fragilis

<400> 10318

Pro Arg Ser Glu Gly Tyr Val Val Tyr Ser Val Glu Gln Ala Glu Gly			
1	5	10	15
Ser Ile Met Leu Asp Glu Leu Thr Leu Asp Arg Ser Lys Lys Tyr Ala			
20	25	30	
Val Val Met Gly Asn Glu Val Lys Gly Val Gln Gln Glu Val Ile Asp			
35	40	45	
His Ser Asp Gly Cys Ile Glu Ile Pro Gln Tyr Gly Thr Lys His Ser			
50	55	60	
Leu Asn Val Ser Val Thr Ala Gly Ile Val Ile Trp Asp Leu Phe Lys			
65	70	75	80
Lys Leu Lys			

<210> 10319

<211> 80

<212> PRT

<213> B.fragilis

<400> 10319

Thr Asp Pro Leu Asp Pro Ser Ser Pro Val Val Lys Thr Leu Tyr Lys			
1	5	10	15
Tyr Arg Val Phe Ile Ser Asp Phe Lys Glu Asn Lys Glu Lys Phe Gln			
20	25	30	
Asp Asn Lys Phe Pro Asn Ser Ile Asn Val Ser Lys Arg Ile Lys Gln			
35	40	45	
Thr Thr Tyr His Ser Phe Phe Ile Tyr Ser His Pro Val Trp Val Ile			
50	55	60	
Tyr Pro Lys Pro Leu Pro Leu His Pro Gln Asn Pro Asn Lys Ser Asp			
65	70	75	80

<210> 10320

<211> 140

<212> PRT

<213> B.fragilis

<400> 10320

Phe Arg Thr Asp Ile Lys Met Thr Ala Gln Glu Phe Phe Lys Asn Asp			
1	5	10	15
Leu Phe Ala Thr Asn Ala Gly Val Glu Leu Ile Glu Ile Arg Glu Gly			
20	25	30	
Tyr Ser Lys Ala Lys Leu Glu Ile Lys Pro Glu His Leu Asn Ala Gly			
35	40	45	
Gln Arg Thr Gln Gly Gly Ala Ile Phe Thr Leu Ala Asp Leu Ala Leu			

50	55	60
Ala Ala Ala Ala Asn Ser His Gly Thr Leu Ala Phe Ser Leu Ser Ser		
65	70	75 80
Asn Ile Thr Phe Leu Arg Ala Ser Gly Pro Gly Asp Thr Leu Tyr Ala		
85	90	95
Glu Ala Arg Glu Arg Tyr Thr Gly Arg Ser Thr Gly Tyr Tyr Gln Ile		
100	105	110
Asp Val Thr Asp Gln Glu Gly Arg Leu Ile Ala Thr Phe Glu Ser Ser		
115	120	125
Val Phe Arg Lys Lys Asp Glu Val Pro Phe Thr Leu		
130	135	140

<210> 10321

<211> 304

<212> PRT

<213> B.fragilis

<400> 10321

Ala Gln Ser Arg Thr Asn Leu Lys Asn Arg Asn Gln Met Lys Thr Arg		
1 5 10 15		
Arg Lys Arg Pro Glu Ile Val Lys Thr Gln Thr Val Ala Ala Ala Ile		
20 25 30		
Arg Arg Lys Glu Trp Ile Cys Leu Ile Ala Leu Leu Phe Ala Phe		
35 40 45		
Pro Ser Ser Gly Asn Ala Gln Cys Glu Ala Lys Asn Asp Ala Phe Lys		
50 55 60		
Ser Gly Glu His Val Met Tyr Glu Leu Tyr Phe Asn Trp Lys Phe Ile		
65 70 75 80		
Trp Lys Lys Val Gly Leu Ala Ser Leu Thr Thr Asn Ser Thr Thr Tyr		
85 90 95		
His Ser Glu Pro Ala Tyr Arg Val Asn Leu Leu Ala Ile Ser Ser Lys		
100 105 110		
Glu Ala Asp Phe Phe Lys Met Arg Asp Thr Leu Thr Ser Val Met		
115 120 125		
Thr Glu Lys Leu Glu Pro Arg Tyr Phe Arg Lys Gly Ala Glu Glu Gly		
130 135 140		
Lys Arg Tyr Thr Val Asp Glu Ala Arg Phe Ser Phe Arg Glu Gly Met		
145 150 155 160		
Cys Tyr Val Asn Gln Lys Arg Val Arg Lys Asp Gly Ser Ile Thr Glu		
165 170 175		
Thr Glu Gln Ser Asp Asn Arg Cys Ile Tyr Asp Met Leu Thr Ile Leu		
180 185 190		
Ala Gln Ala Arg Ser Phe Asp Pro Lys Glu Tyr Thr Ile Gly Gln Arg		
195 200 205		
Ile Gln Phe Pro Met Ala Thr Gly Arg Arg Val Glu Glu Gln Thr Leu		
210 215 220		
Ile Tyr Arg Gly Ile Lys Lys Ile Thr Ala Glu Asn Asp Thr Thr Tyr		
225 230 235 240		
Arg Cys Leu Ile Phe Ser Leu Val Glu Tyr Asn Lys Lys Gly Lys Glu		
245 250 255		
Lys Glu Val Ile Thr Phe Tyr Val Thr Asp Asp Arg Asn His Leu Pro		
260 265 270		
Val Arg Leu Asp Met His Leu Asn Phe Gly Ser Ala Lys Ala Phe Leu		
275 280 285		
Lys Ser Val Ser Gly Tyr Arg His Pro Gln Thr Ser Ile Val Thr Lys		
290 295 300		

<210> 10322

<211> 320

<212> PRT
 <213> B.fragilis

<400> 10322

His Lys Arg Ile Lys Ala His Gln Thr Asp Tyr Val Ser Phe Ile Leu
 1 5 10 15
 Tyr Leu Leu Ala Ser Cys Leu Gly Asp Ile Pro Lys Thr Thr Phe
 20 25 30
 Ala Pro Ser Lys Pro Lys Gln Lys Arg Leu Met Lys Tyr Lys Leu Leu
 35 40 45
 Val Leu Asp Leu Asp Gly Thr Leu Thr Asn Ala Lys Lys Glu Ile Thr
 50 55 60
 Pro Arg Asn Arg Glu Ala Leu Ile Arg Val Gln Gln Gly Val Lys
 65 70 75 80
 Leu Ile Leu Ala Ser Gly Arg Pro Thr Phe Gly Ile Ala Pro Leu Ala
 85 90 95
 Asp Glu Leu Arg Met Lys Glu Phe Gly Gly Phe Ile Leu Ser Tyr Asn
 100 105 110
 Gly Gly Glu Ile Ile Asp Trp Ser Thr Gly Glu Ile Val Tyr Ala Asn
 115 120 125
 Val Leu Pro Asp Glu Val Ile Pro Arg Leu Tyr Glu Cys Ala Thr Arg
 130 135 140
 Asn Gln Leu Pro Ile Leu Thr Tyr Asp Arg Gln Tyr Ile Ile Thr Glu
 145 150 155 160
 Tyr Pro Asp Asp Val Tyr Val Arg Lys Glu Ala Phe Leu Asn Lys Met
 165 170 175
 Gln Ile Tyr Pro Ser Lys Asp Phe Leu Lys Asp Ile Arg Leu Pro Leu
 180 185 190
 Pro Lys Cys Leu Ile Val Gly Glu Pro His Arg Leu Ile Pro Ile Glu
 195 200 205
 Ala Glu Leu Ser Val Glu Leu Gln Gly Gln Leu Ser Val Tyr Arg Ser
 210 215 220
 Glu Pro Phe Phe Leu Glu Leu Val Pro Gln Gly Ile Asp Lys Ala Gln
 225 230 235 240
 Ser Leu Ser Val Leu Leu Asn Lys Leu Asn Met Asn Arg Glu Glu Ile
 245 250 255
 Val Ala Val Gly Asp Gly Tyr Asn Asp Leu Ser Met Ile Gln Phe Ala
 260 265 270
 Gly Leu Gly Val Ala Met Gly Asn Ala Gln Glu Pro Val Lys Lys Ala
 275 280 285
 Ala Asp Tyr Ile Thr Leu Ser Asn Glu Glu Asp Gly Val Ala Ala Val
 290 295 300
 Val Asn Lys Phe Phe Thr Lys Ala Pro Glu Lys Gly Glu Thr Thr Ala
 305 310 315 320

<210> 10323

<211> 495
 <212> PRT
 <213> B.fragilis

<400> 10323

Ile Ser Asn Val Met Glu His Gln Leu Thr Ile Tyr Asn Thr Leu Asp
 1 5 10 15
 Arg Lys Lys Glu Leu Phe Val Pro Leu His Ala Pro His Val Gly Met
 20 25 30
 Tyr Val Cys Gly Pro Thr Val Tyr Gly Asp Ala His Leu Gly His Ala
 35 40 45
 Arg Pro Ala Ile Thr Phe Asp Val Leu Phe Arg Tyr Leu Thr Arg Leu
 50 55 60

Gly Tyr Lys Val Arg Tyr Val Arg Asn Ile Thr Asp Val Gly His Leu
 65 70 75 80
 Glu His Asp Ala Asp Glu Gly Glu Asp Lys Ile Ala Lys Lys Ala Arg
 85 90 95
 Leu Glu Gln Leu Glu Pro Met Glu Val Val Gln Tyr Tyr Leu Asn Arg
 100 105 110
 Tyr His Lys Ala Met Glu Ala Leu Asn Val Leu Pro Pro Ser Ile Glu
 115 120 125
 Pro His Ala Ser Gly His Ile Ile Glu Gln Ile Glu Leu Val Lys Lys
 130 135 140
 Ile Leu Asp Ala Gly Tyr Ala Tyr Glu Ser Gln Gly Ser Val Tyr Phe
 145 150 155 160
 Asp Val Ala Lys Tyr Asn Lys Asp His His Tyr Gly Lys Leu Ser Gly
 165 170 175
 Arg Asn Leu Asp Asp Val Leu Asn Thr Thr Arg Glu Leu Asp Gly Gln
 180 185 190
 Glu Glu Lys His Asn Pro Ala Asp Phe Ala Leu Trp Lys Arg Ala Gln
 195 200 205
 Pro Glu His Ile Met Arg Trp Pro Ser Pro Trp Gly Asp Gly Phe Pro
 210 215 220
 Gly Trp His Ala Glu Cys Thr Ala Met Gly Arg Lys Tyr Leu Gly Glu
 225 230 235 240
 His Phe Asp Ile His Gly Gly Met Asp Leu Ile Phe Pro His His
 245 250 255
 Glu Cys Glu Ile Ala Gln Ser Val Ala Ser Gln Gly Asp Asp Met Val
 260 265 270
 His Tyr Trp Met His Asn Asn Met Ile Thr Ile Asn Gly Thr Lys Met
 275 280 285
 Gly Lys Ser Leu Gly Asn Phe Ile Thr Leu Asp Glu Phe Phe Ser Gly
 290 295 300
 Ser His Lys Leu Leu Thr Gln Ala Tyr Ser Pro Met Thr Ile Arg Leu
 305 310 315 320
 Phe Ile Leu Gln Ala His Tyr Arg Ser Pro Val Asp Phe Ser Asn Glu
 325 330 335
 Ala Leu Gln Ala Ala Glu Lys Gly Leu Ser Arg Leu Met Glu Ala Val
 340 345 350
 Asp Ser Leu Glu Lys Ile Thr Pro Ala Ala Thr Ser Asn Val Asp Val
 355 360 365
 Lys Ser Leu Arg Thr Lys Cys Phe Glu Ala Met Asn Asp Asp Leu Asn
 370 375 380
 Thr Pro Ile Val Ile Ser His Leu Phe Asp Gly Ala Lys Met Ile Asn
 385 390 395 400
 Asn Ile Ile Ala Gly Asn Asn Thr Ile Ser Ala Asp Asp Leu Lys Asp
 405 410 415
 Leu Lys Glu Val Phe His Thr Phe Cys Phe Asp Ile Leu Gly Leu Lys
 420 425 430
 Glu Glu Ile Gly Ser Ser Asp Gly Arg Glu Ala Ala Tyr Gly Lys Val
 435 440 445
 Val Asp Met Leu Leu Glu Gln Arg Val Lys Ala Lys Ala Asn Lys Asp
 450 455 460
 Trp Ala Thr Ser Asp Leu Ile Arg Asn Glu Leu Thr Ala Leu Gly Phe
 465 470 475 480
 Glu Ile Lys Asp Thr Lys Asp Gly Phe Glu Trp Lys Leu Asn Lys
 485 490 495

<210> 10324

<211> 214

<212> PRT

<213> B.fragilis

<400> 10324

Pro Thr Leu Pro Ile Met Ala Leu Lys Glu Lys Ile Lys Gln Asn Pro
 1 5 10 15
 Ala Leu Lys Gln Ala Val His Arg Phe Ile Met His Pro Val Lys Thr
 20 25 30
 Arg Pro Asn Trp Trp Ile Arg Ile Phe Ser Phe Leu Tyr Leu Lys Arg
 35 40 45
 Gly Lys Gly Ser Val Ile Tyr Arg Ser Val Arg Gln Asp Leu Pro Pro
 50 55 60
 Phe Asn Leu Phe Ser Leu Gly Lys Tyr Ser Val Val Glu Asp Phe Ser
 65 70 75 80
 Cys Leu Asn Asn Ala Val Gly Asp Leu Ile Ile Gly Glu Tyr Thr Arg
 85 90 95
 Ile Gly Leu Gly Asn Thr Ile Ile Gly Pro Ala Thr Ile Gly Asn His
 100 105 110
 Val Asn Leu Ala Gln Asn Val Thr Val Thr Gly Leu Asn His Asn Tyr
 115 120 125
 Gln Asp Thr Gly Lys Arg Ile Asp Glu Gln Gly Val Ser Thr Gln Pro
 130 135 140
 Ile Thr Ile Glu Asp Asp Val Trp Val Gly Ala Asn Ser Val Ile Leu
 145 150 155 160
 Pro Gly Val Thr Leu Gly Lys His Cys Val Val Ala Ala Gly Ser Val
 165 170 175
 Val Ser Arg Ser Ile Pro Pro Tyr Ser Val Cys Ala Gly Ser Pro Ala
 180 185 190
 Lys Val Val Lys Gln Phe Asn Pro Glu Ser Arg Thr Trp Glu Lys Thr
 195 200 205
 Val Ser Lys Asn Gly Lys
 210

<210> 10325

<211> 62
 <212> PRT
 <213> B.fragilis

<400> 10325

Asn Tyr Pro Pro His Ile Arg Lys Ala Ile Lys Ala Phe Leu Tyr Tyr
 1 5 10 15
 Leu Lys Ile Pro Lys Asn Thr Ile Phe Phe Leu Pro Lys Lys Leu Ser
 20 25 30
 Ile Thr Tyr Ser Phe Phe Thr Phe Lys Asn Leu Tyr Leu Ile Glu Asn
 35 40 45
 His Leu Lys Ile Phe Tyr Tyr Leu Lys Ser Leu Ser Asn Thr
 50 55 60

<210> 10326

<211> 73
 <212> PRT
 <213> B.fragilis

<400> 10326

Arg His Ser Leu Pro Thr Gly Ile Ile Ala Thr Lys Tyr Ser Asp Gly
 1 5 10 15
 Phe Phe Leu Pro Ser Arg Lys Thr Asn Leu Ile Ser Ile Ala Leu Ile
 20 25 30
 Ala Thr Ala Leu Leu Cys Tyr Asp Trp Ser Leu Ser Leu Lys Trp Trp
 35 40 45
 Ser Leu Leu Tyr Ile Leu Met Phe Ile Ile Cys Leu Ala Ile Pro Asp

50	55	60
Tyr Leu Val Arg Gln Lys Thr Lys Lys		
65	70	

<210> 10327

<211> 453

<212> PRT

<213> B.fragilis

<400> 10327

1	5	10	
Ser Lys Thr Ser Met Asn Lys Arg Cys	Leu Leu Thr Ile Leu	Lys Gly	
20	25	30	
Gly Cys Ala Ala Met Gly Ala Phe Ala Gln Gln His	Ala Thr Gly Lys		
35	40	45	
Lys Thr Glu Met Ser Val Asp Leu Asn Pro Val Val	Val Thr Gly Thr		
50	55	60	
Gly Thr His Gln Arg Leu Lys Asn Thr Pro Ala Pro	Val Glu Val Val		
65	70	75	80
Thr Ala Asn Glu Ile Lys Lys Ala Gly Ile Thr Asp	Phe Gln Gln Ala		
85	90	95	
Met Thr Met Leu Val Pro Ser Leu Ser Phe Ser Thr Asn	Ser Met Gly		
100	105	110	
Ser Tyr Leu Met Met Asn Gly Leu Ser Asn Lys Tyr	Val Leu Ile Leu		
115	120	125	
Ile Asn Gly Arg Lys Leu Thr Gly Asp Thr Ala Asn	Asn Ile Asp Leu		
130	135	140	
Ser Arg Ile Asp Met Ser Arg Val Lys Arg Ile Glu	Val Leu Asp Gly		
145	150	155	160
Ala Gly Ser Ser Leu Tyr Gly Ser Asp Ala Ile Ala	Gly Val Ile Asn		
165	170	175	
Ile Ile Thr Asn Glu Pro Lys Glu Leu Met Gln Val	Thr Ser Thr Thr		
180	185	190	
Arg Tyr Glu Asp His Arg Gln Leu Thr Gln Met Val	Asn Ala Asp Ile		
195	200	205	
Ala Thr Glu Lys Phe Gly Ser Tyr Thr Ser Tyr Lys	His Glu Gln Ser		
210	215	220	
Ala Gly Trp Gln Asn Ser Asp Leu Ala Tyr Val	Thr Asp Lys Gly		
225	230	235	240
Asn Val Ser Thr Val Pro Thr Val Ser Ala Thr Ser	Asn Gly Phe His		
245	250	255	
Ser Asn Leu Val Asn Gln Lys Phe Thr Phe Glu Pro	Thr Glu Lys Leu		
260	265	270	
Ser Phe Tyr Ala Asn Gly Gly Tyr Tyr Trp Lys	Leu Thr Asp Arg Pro		
275	280	285	
Val Tyr Thr Ala Asp Ile Asp Gly Gly Ser Lys	Tyr Asp Leu His Tyr		
290	295	300	
Glu Ser Tyr Asn Phe Gly Leu Gly Gly Arg Tyr	Lys Ile Asn Lys Arg		
305	310	315	320
Ser Ser Ile Gln Leu Asp Leu Met Asn Asp Asn	Tyr Met Gln Asn Tyr		
325	330	335	
Lys Tyr Thr Val Ala Asp Asp Lys Asn Lys Ile	Ala Ile Gly Asp Tyr		
340	345	350	
Ala Lys Thr Lys Glu Gln His Phe Tyr Asp Ala	Glu Leu Lys Gly Ile		
355	360	365	
Phe Asn Phe Ala Lys Asn Asn Met Thr Val Leu	Gly Val Asp Tyr Arg		
370	375	380	
Ser Glu Ser Leu Asp Arg Pro Ser Ala Arg Val	Asp Lys Ser Val Tyr		

385	390	395	400
Thr Ala Ser Ala Tyr Ala Gln His Glu Ile Lys Leu Trp Asn Cys Leu			
405	410	415	
Thr Gly Ile Ala Gly Val Arg Tyr Asp Tyr His Glu Leu Ala Gly Gly			
420	425	430	
Arg Phe Thr Pro Lys Leu Ala Val Val Phe Thr Thr Gly Val Asp Arg			
435	440	445	
Thr Gly Leu His Leu			
450			

<210> 10328

<211> 77

<212> PRT

<213> B.fragilis

<400> 10328

Pro Val Lys His Asp Gly Lys Val Ala Phe Gln Lys Gly Ile Val Arg			
1	5	10	15
Lys Pro Ala Glu Ala Asp Ile Asp Asn Ser Ala Leu Pro Gly Ser Gly			
20	25	30	
Arg Pro Phe Thr Asn Thr Leu Phe Lys Asn Ile Asn Glu Gln Lys Met			
35	40	45	
Leu Thr Asp His Pro Leu Gly Arg Met Arg Gly Asn Gly Cys Ile Cys			
50	55	60	
Thr Thr Thr Arg Asp Arg Gln Glu Asp Arg Asp Glu Cys			
65	70	75	

<210> 10329

<211> 210

<212> PRT

<213> B.fragilis

<400> 10329

Ser Lys Glu Thr Ile Asn Val Lys Leu Asn Phe Lys Arg Glu Phe Met			
1	5	10	15
Lys Arg Lys Leu Met Leu Leu Leu Thr Cys Leu Phe Met Gly Ile Gly			
20	25	30	
Leu Val Thr Ala Gln Thr Gln Lys Val Thr Gly Val Val Ile Ser Glu			
35	40	45	
Glu Asp Gly Gln Pro Val Val Gly Ala Ser Val Leu Ala Lys Gly Thr			
50	55	60	
Thr Val Gly Val Ile Thr Asp Val Asp Gly Lys Phe Thr Leu Ser Gly			
65	70	75	80
Ile Pro Ser Ser Ala Lys Thr Leu Gln Ile Ser Tyr Ile Gly Met Gln			
85	90	95	
Thr Ala Glu Val Ala Ile Ala Pro Val Ile Lys Val Ile Leu Lys Thr			
100	105	110	
Asp Ala Lys Ala Leu Asp Glu Val Val Val Thr Ala Met Gly Ile Ser			
115	120	125	
Lys Glu Lys Lys Ala Leu Gly Tyr Ala Val Gln Asp Val Lys Gly Asp			
130	135	140	
Lys Leu Thr Gln Ala Ser Ser Ser Asn Leu Ser Ser Ala Leu Gln Gly			
145	150	155	160
Lys Val Ser Gly Val Glu Ile Ser Pro Ser Ser Gly Met Pro Gly Ala			
165	170	175	
Ser Ser Lys Met Thr Ile Arg Gly Ser Arg Ser Phe Thr Gly Asp Asn			
180	185	190	
Thr Pro Leu Tyr Val Val Val Phe Thr Lys Gly Val His Pro Thr Val			
195	200	205	

Phe Ile
210

<210> 10330

<211> 68

<212> PRT

<213> B.fragilis

<400> 10330

Cys Arg Cys Tyr Gln Ser His Ala Leu Gln Val Tyr Ala Glu Ile Glu
1 5 10 15

Lys Lys Glu Leu Gly Leu Val Gln Pro Gly Lys Gln Asn Ser Leu Asp
20 25 30

Leu Phe Lys Asp Ser Phe Glu Asn Lys Thr Lys Ala Leu Asn Leu Leu
35 40 45

Ile Phe Ser His Glu Ile Pro Lys Thr Ser Leu Lys Glu Ser Pro Lys
50 55 60

Arg Asn Phe Phe
65

<210> 10331

<211> 614

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (570), (587)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10331

Lys Gln Thr Leu Ser Asp Thr Ser Ser Pro Val Val Arg Asn Cys Ser
1 5 10 15

Met Ser Ser Thr Ile Asn Gly Cys Gly Val Trp Met Cys Ser Asp His
20 25 30

Thr Ile Phe Ile Gly Gly Thr Gly Gly Leu Ser Ser Phe Leu Glu Lys
35 40 45

Asp Leu Asn Lys Glu Tyr Pro Lys Pro Lys Leu Tyr Phe Ser Ser Leu
50 55 60

Ser Val Asn Asn Ala Arg Ile Ser Pro Asp Asp Lys Ser Arg Ile Leu
65 70 75 80

Thr Glu Gly Leu Pro Phe Val Arg Glu Ile Asn Leu Asn Ala Thr Gln
85 90 95

Asn Asn Leu Thr Val Glu Phe Ala Ser Ser Asn Tyr Val Asp Ile Leu
100 105 110

Asn Asn Thr Trp Tyr Glu Tyr Gln Leu Glu Gly Phe Asp Lys Gln Trp
115 120 125

Ser Leu Thr Ser Gln Thr Ser Leu Lys Tyr Thr Asn Leu Asp Pro Gly
130 135 140

Asp Tyr Val Leu His Val Arg Gln Lys Gly Asn Ser Leu Lys Met Arg
145 150 155 160

Lys Ala Gln Glu Ile Leu Leu Gln Ile His Ile Asn Thr Pro Trp Tyr
165 170 175

Leu Thr Trp Trp Ala Trp Leu Ser Tyr Ile Thr Ile Ser Ile Ser Val
180 185 190

Thr Tyr Phe Ile Trp Arg Glu Lys Ser Ser Arg Arg Thr Leu Ala Met
195 200 205

Ser Leu Glu Lys Glu Arg Ile Glu Lys Glu His Ile Glu Glu Met Asn
210 215 220

Gln Ala Lys Leu Arg Phe Phe Thr Asn Val Ser His Glu Phe Arg Thr
 225 230 235 240
 Pro Leu Thr Leu Ile Ile Ser Gln Val Glu Leu Met Leu Gln Lys Asn
 245 250 255
 Thr Ile Pro Pro Ser Leu His Asn Ser Ile Phe Arg Ile Arg Lys His
 260 265 270
 Ala Gln Gln Met Lys Leu Leu Ile Ser Glu Leu Leu Asp Phe Arg Lys
 275 280 285
 Phe Asp Gln Asn Tyr Ile Gln Leu Lys Leu Ser Glu Gln Ser Leu Asn
 290 295 300
 Thr Phe Leu Glu Glu Val Tyr Leu Ser Phe Ser Ala Tyr Ala Ser Gln
 305 310 315 320
 Lys Ser Ile Ser Tyr His Leu Lys Leu Leu Glu Gln Asp Ile Ser Ile
 325 330 335
 Trp Ile Asp Asp Trp Gln Met Arg Lys Val Leu Phe Asn Leu Leu Ser
 340 345 350
 Asn Ala Phe Lys His Val Pro Asp Lys Gly Glu Ile Ser Ile Leu Thr
 355 360 365
 Ser Thr Thr Pro Asp Gln Val Val Ile Ala Val Lys Asp Ser Gly Asn
 370 375 380
 Gly Ile Ser Lys Glu Glu Gln Glu Arg Ile Phe Asp Arg Phe Tyr Gln
 385 390 395 400
 Ala Asp Asn Arg Asn Lys Ala Ile His Val Gly Thr Gly Ile Gly Leu
 405 410 415
 Ala Leu Thr Lys Ser Ile Ile Gln Leu His His Gly Thr Ile Glu Val
 420 425 430
 Glu Ser Glu Leu Asn Glu Gly Ser Cys Phe Ile Val Lys Leu Pro Lys
 435 440 445
 Thr Arg Asp Cys Phe Glu Lys Asp Thr Glu Val Val Phe Leu Glu Ser
 450 455 460
 Pro Glu Lys Glu Pro Met Val Gln Glu Asn Thr Ile Pro Asp Glu Asn
 465 470 475 480
 Phe Met Lys Lys Asp Asp Ser Thr Phe Glu Thr Pro Leu Ile Asp Glu
 485 490 495
 Arg Glu Gly Lys Arg Lys Val Leu Leu Val Glu Asp Asn Val Glu Leu
 500 505 510
 Leu Gln Val Leu Lys Glu Ile Phe Ser Ser Leu Tyr Gln Val Val Thr
 515 520 525
 Ala Ala Asn Gly Glu Glu Gly Leu Lys Gln Ala Phe Ala Glu Val Pro
 530 535 540
 Asp Leu Ile Val Ser Asp Val Met Met Pro Val Met Thr Gly Thr Glu
 545 550 555 560
 Met Cys Leu Lys Ile Lys Asn Asn Ile Xaa Leu Cys His Ile Pro Val
 565 570 575
 Val Leu Leu Thr Ala Leu Asp Thr Val Asp Xaa Asn Ile Glu Gly Leu
 580 585 590
 Pro Arg Gly Ala Asp Asp Tyr Ile Thr Gln Pro Phe Asn Ala Lys Asn
 595 600 605
 Leu Ile Thr Pro Cys Lys
 610

<210> 10332

<211> 145

<212> PRT

<213> B.fragilis

<400> 10332

Glu Asp Ser Thr Ile Ser Val Gly Ile Glu Arg Gly Lys Val Tyr Thr
 1 5 10 15

Phe Asp Leu Arg Tyr Val Pro Ala Pro Glu Arg Phe Ser Phe Val Ile
 20 25 30
 Asp Lys Lys Asp Thr Gln Arg Val Ala Ile Leu Asp Glu Lys Glu Arg
 35 40 45
 Ser Tyr Gly Gln Lys Glu Arg Ile Arg Glu Ala Ile Ala Lys Arg Thr
 50 55 60
 Pro Leu Asp Leu Gly Leu Lys Asp Lys Asn Ser Gly Val Glu Phe Glu
 65 70 75 80
 Val Gly Asn Ile Phe Ile Asp Gly Asp Ile Leu Leu Leu Arg Met Thr
 85 90 95
 Leu Ile Asn Arg Thr Gln Ile Gly Tyr Thr Thr Asp Phe Met Arg Phe
 100 105 110
 Tyr Ile Gln Asp Ala Lys Ile Arg Lys Lys Thr Ala Val Gln Gln Leu
 115 120 125
 Glu Gln Asn Ile Leu Phe Thr Phe Asp Tyr Thr Gly Arg Ser Thr Gly
 130 135 140
 Thr
 145

<210> 10333

<211> 60

<212> PRT

<213> B.fragilis

<400> 10333

Met Glu Thr Ala Phe Ala Gly Tyr Gly Met Asp Pro Asp Ala Lys Ala
 1 5 10 15
 Ala Ala Leu Pro Glu Pro Val Phe Gln Gly Thr Gly Glu Arg Asp Leu
 20 25 30
 Val Gly Tyr Ser Val Pro Gly Glu Tyr Ile Pro Val Val Phe Gln Cys
 35 40 45
 Leu Gln Ala Phe Ala Pro Val Gln Cys Leu Val Glu
 50 55 60

<210> 10334

<211> 193

<212> PRT

<213> B.fragilis

<400> 10334

Ser Arg Gln Asn Ile Lys Glu Asp Ser Pro Met Lys Leu Leu Leu Pro
 1 5 10 15
 Leu Leu Leu Phe Cys Leu Pro Phe Asn Gly Ser Asn Gly Gly Lys Glu
 20 25 30
 Leu Leu Asp Lys Ala Leu Asp Arg Cys Glu Arg Leu Glu Thr Leu Glu
 35 40 45
 Asn Tyr Arg Asp Ile Leu Ser Arg Tyr Gly Val Ser Asp Lys Ile Pro
 50 55 60
 Leu Ala Cys Pro Leu Lys Asp Arg Phe Arg Lys Ser Ser Gly Phe Gly
 65 70 75 80
 Ile Arg Ile His Pro Ile Thr Gly Lys Arg Ser Phe His Ser Gly Ile
 85 90 95
 Asp Met Ala Val Gly Leu Ala Ala Pro Val Tyr Ala Thr Ala Ser Gly
 100 105 110
 Thr Val Ser Phe Ala Gly Arg Lys Gly Gly Tyr Gly Arg Cys Val Ile
 115 120 125
 Ile Arg His Ser Tyr Gly Phe Glu Thr Leu Tyr Ala His Leu Ala Ala
 130 135 140
 Tyr Tyr Thr Thr Glu Gly Gln Lys Val Asp Lys Gly Ala Val Ile Ala

145	150	155	160
Phe Ala Gly Ser Thr Gly Lys Ser Thr Gly Tyr His Leu His Tyr Glu			
165	170	175	
Ile Arg Lys Asn Gly Lys Pro Ile Lys Pro Tyr Trp Tyr Gly Tyr Asp			
180	185	190	
Asp			

<210> 10335

<211> 117

<212> PRT

<213> B.fragilis

<400> 10335

Thr Ala His Arg Ser Val Ile Arg Arg Ile Ser Cys Gly Ser Thr Ser			
1	5	10	15
Arg Met Pro Arg Ser Ala Lys Arg Arg Arg Tyr Ser Ser Ser Arg			
20	25	30	
Thr Ser Cys Ser Leu Ser Ile Ile Pro Glu Glu Val Pro Ala His Glu			
35	40	45	
Ser Arg Thr Phe Thr Val Ala Met Asn Lys Phe Thr Ile Pro Asp Lys			
50	55	60	
Lys Arg Leu Ile Ile Glu Ile Gln Glu Arg Asn Gly Gly Arg His Phe			
65	70	75	80
Leu Tyr Lys Leu Lys Asn Lys Ser Leu Leu Thr Ala Glu Glu Val Phe			
85	90	95	
Arg Ser Arg Lys Gln Gln Glu Thr Glu Asp Glu Ala Asp Lys Ile Leu			
100	105	110	
Arg Arg Ile Ala Arg			
115			

<210> 10336

<211> 117

<212> PRT

<213> B.fragilis

<400> 10336

Asn His Thr Gly Met Ala Met Thr Ile Glu Gln Glu Ile Glu Gln Leu			
1	5	10	15
Val Leu Gln Cys Ile Ala Ser Asp Gly Leu Lys Ala Cys Pro Lys Asp			
20	25	30	
Leu Ala Phe Leu Glu Lys Tyr Gly Leu Lys Asn Leu Tyr Phe Phe Ser			
35	40	45	
Leu Glu Tyr Ala Met Glu Gly Thr Asp Thr Thr Val Leu Asp Ser Lys			
50	55	60	
Ala Lys Gly Leu Ile Arg Trp Tyr Leu Tyr Ser Thr Asp Phe Pro Leu			
65	70	75	80
Leu Arg Gln Lys Tyr Glu Arg Glu Gly Lys Ala Glu Leu Met Lys Cys			
85	90	95	
Leu Tyr Leu Glu Glu Arg Tyr Phe Arg Lys Phe Leu Glu Ser Thr Gly			
100	105	110	
Gln Glu Glu Gly Leu			
115			

<210> 10337

<211> 64

<212> PRT

<213> B.fragilis

<400> 10337

Val	Val	Ala	Ala	Ala	Pro	Ser	Ser	Pro	Val	Val	Lys	Thr	Met	Ser	Asp
1					5				10				15		
Ser	Leu	Val	Glu	Arg	Lys	Gly	Ala	Ser	Asp	Glu	Gln	His	Arg	Lys	Leu
					20				25				30		
Leu	Tyr	Lys	Arg	Tyr	Gly	Arg	Leu	Thr	Phe	Arg	Glu	Gly	Lys	Ile	Ile
					35				40				45		
Phe	Leu	Asn	Ser	Arg	Cys	Pro	Ala	Phe	Tyr	Val	Lys	Lys	Glu	Glu	Lys
					50				55				60		

<210> 10338

<211> 515

<212> PRT

<213> B.fragilis

<400> 10338

Thr	Ser	Lys	Tyr	Cys	Thr	Ser	Met	Asp	Ser	Ile	Leu	Phe	Trp	Leu	Val	
1					5				10				15			
Pro	Phe	Ala	Ser	Val	Leu	Ala	Leu	Cys	Phe	Ala	Leu	Tyr	Phe	His	Lys	
					20				25				30			
Gln	Met	Met	Lys	Glu	Ser	Glu	Gly	Thr	Pro	Gln	Met	Ile	Lys	Ile	Ala	
					35				40				45			
Ala	Ala	Ala	Val	Arg	Arg	Gly	Ala	Met	Ser	Tyr	Leu	Lys	Gln	Gln	Tyr	Lys
					50				55				60			
Ile	Val	Gly	Trp	Val	Phe	Leu	Gly	Leu	Val	Ile	Leu	Phe	Ser	Val	Met	
					65				70				75			80
Ala	Tyr	Gly	Phe	Gln	Val	Gln	Asn	Ala	Trp	Val	Pro	Ile	Ala	Phe	Leu	
					85				90				95			
Thr	Gly	Gly	Phe	Phe	Ser	Gly	Leu	Ser	Gly	Phe	Leu	Gly	Met	Lys	Thr	
					100				105				110			
Ala	Thr	Tyr	Ala	Ser	Ala	Arg	Thr	Ala	Asn	Ala	Ala	Arg	Thr	Ser	Leu	
					115				120				125			
Asn	Ala	Gly	Leu	Arg	Ile	Ala	Phe	Arg	Ser	Gly	Ala	Val	Met	Gly	Leu	
					130				135				140			
Val	Val	Val	Gly	Leu	Gly	Leu	Leu	Asp	Ile	Ser	Phe	Trp	Tyr	Leu	Leu	
					145				150				155			160
Leu	Asn	Trp	Ala	Ile	Pro	Ala	Asp	Val	Leu	Thr	Pro	Thr	His	Lys	Leu	
					165				170				175			
Cys	Ile	Ile	Thr	Thr	Thr	Met	Leu	Thr	Phe	Gly	Met	Gly	Ala	Ser	Thr	
					180				185				190			
Gln	Ala	Leu	Phe	Ala	Arg	Val	Gly	Gly	Ile	Tyr	Thr	Lys	Ala	Ala		
					195				200				205			
Asp	Val	Gly	Ala	Asp	Leu	Val	Gly	Lys	Val	Glu	Ala	Gly	Ile	Pro	Glu	
					210				215				220			
Asp	Asp	Pro	Arg	Asn	Pro	Ala	Thr	Ile	Ala	Asp	Asn	Val	Gly	Asp	Asn	
					225				230				235			240
Val	Gly	Asp	Val	Ala	Gly	Met	Gly	Ala	Asp	Leu	Tyr	Glu	Ser	Tyr	Cys	
					245				250				255			
Gly	Ser	Ile	Leu	Ala	Thr	Ala	Ala	Leu	Gly	Ala	Ala	Phe	Ile	His		
					260				265				270			
Thr	Gly	Asp	Thr	Val	Met	Gln	Phe	Lys	Ala	Val	Ile	Ala	Pro	Met	Leu	
					275				280				285			
Ile	Ala	Ala	Ile	Gly	Ile	Ile	Leu	Ser	Ile	Ile	Gly	Ile	Phe	Ser	Val	
					290				295				300			
Arg	Thr	Lys	Glu	Asn	Ala	Thr	Met	Lys	Asp	Leu	Leu	Gly	Ser	Leu	Ala	
					305				310				315			320
Trp	Gly	Thr	Asn	Leu	Ser	Ser	Ala	Leu	Ile	Val	Ala	Ala	Thr	Phe	Phe	
					325				330				335			
Ile	Leu	Trp	Leu	Leu	Gln	Leu	Asp	Asn	Trp	Met	Trp	Ile	Ser	Cys	Ala	

340	345	350	
Val Val Val Gly Leu Val Val Gly Ile Val Ile Gly Arg Ser Thr Glu			
355	360	365	
Tyr Tyr Thr Ser Gln Ser Tyr Arg Pro Thr Gln Lys Leu Ser Glu Ser			
370	375	380	
Gly Lys Thr Gly Pro Ala Thr Val Ile Ile Ser Gly Ile Gly Leu Gly			
385	390	395	400
Met Leu Ser Thr Ala Ile Pro Val Val Ala Val Val Ile Gly Ile Ile			
405	410	415	
Ala Ser Tyr Leu Leu Ala Ser Gly Phe Asp Phe Asn Asn Val Gly Met			
420	425	430	
Gly Leu Tyr Gly Ile Gly Ile Ala Ala Val Gly Met Leu Ser Thr Leu			
435	440	445	
Gly Ile Thr Leu Ala Thr Asp Ala Tyr Gly Pro Ile Ala Asp Asn Ala			
450	455	460	
Gly Gly Asn Ala Glu Met Ser Ser Leu Gly Lys Glu Val Arg Lys Arg			
465	470	475	480
Thr Asp Ala Leu Asp Ser Leu Gly Asn Thr Thr Ala Ala Thr Gly Lys			
485	490	495	
Gly Phe Ala Ile Gly Ser Ala Ala Leu Thr Glu Leu Ala Leu Leu Ala			
500	505	510	
Ser Tyr Ile			
515			

<210> 10339
 <211> 299
 <212> PRT
 <213> B.fragilis

<400> 10339			
Phe Pro Leu Ser Gln Pro Leu Arg Ala Lys Leu Lys Asp Tyr Ser Met			
1	5	10	15
Phe Asp Lys Lys Phe Asn Phe Tyr Ile Ala Asn Asp Leu Gly Arg Asn			
20	25	30	
Gly Tyr Tyr Asp Gln Lys Pro Ile Ala Glu Leu Met Gly Thr Met Gly			
35	40	45	
Glu Glu Ile Gly Pro Glu Phe Val Leu Ala Ala Gly Asp Ile His His			
50	55	60	
Phe Glu Gly Val Arg Ser Val Asn Asp Pro Leu Trp Met Thr Asn Phe			
65	70	75	80
Glu Leu Ile Tyr Ser His Pro Glu Leu Met Ile Asp Trp Tyr Pro Val			
85	90	95	
Leu Gly Asn His Glu Tyr Arg Gly Asn Thr Gln Ala Val Leu Asp Tyr			
100	105	110	
Ser Gly Val Ser Arg Arg Trp Thr Met Pro Ala Arg Tyr Tyr Thr Lys			
115	120	125	
Thr Phe Gly Glu Lys Gly Ala Thr Val Arg Ile Val Trp Ile Asp Thr			
130	135	140	
Ala Pro Leu Ile Asp Lys Tyr Arg Asn Glu Ser Ala Thr Tyr Pro Asp			
145	150	155	160
Ala Cys His Gln Asp Met Asn Gly Gln Leu Ala Trp Leu Asp Ser Val			
165	170	175	
Leu Thr Val Ala Lys Glu Asp Trp Val Ile Val Ala Gly His His Pro			
180	185	190	
Ile Tyr Ala Glu Thr Pro Lys Asp Gln Ser Glu Arg Ser Asp Leu Gln			
195	200	205	
Ser Arg Leu Asp Pro Ile Leu Arg Lys His Lys Val Asp Met Tyr Ile			
210	215	220	
Cys Gly His Ile His Asn Phe Gln His Ile Arg Val Pro Gly Ser Asp			

225	230	235	240
Ile Asp Tyr Ile Val Asn Ser Ala Gly Ser	Ile Val Ala Arg Lys Val Lys		
245	250	255	
Pro Ile Glu Gly Thr Gln Phe Cys Asn Pro	Glu Pro Gly Phe Ser Val		
260	265	270	
Cys Ser Ile Asp Lys Gln Glu Leu Asn Leu	Arg Met Ile Asp Lys Lys		
275	280	285	
Gly Asn Ile Leu Tyr Thr Val Thr Arg Lys	Lys		
290	295		

<210> 10340

<211> 163

<212> PRT

<213> B.fragilis

<400> 10340

Gly Leu Val Leu Thr Ser Ala Asp Pro	Tyr Arg Pro Ala Val Lys Thr		
1	5	10	15
Thr Arg Ile Lys Thr Pro Lys Asn Glu	Val Val Thr Ile Pro Asn Ser		
20	25	30	
Phe Ile Met Ser Ser His Thr Val Asn	Tyr Ser Ala Ser Ala Arg Glu		
35	40	45	
Tyr Gly Leu Ile Ile His Ser Glu Val	Thr Ile Gly Tyr Asp Val Pro		
50	55	60	
Trp Arg Gln Val His Gln Leu Leu	Ile Glu Ala Ala Leu Asn Thr Pro		
65	70	75	80
Gly Val Ile Asp Asp Pro Arg Pro	Phe Val Leu Glu Thr Ser Leu Ser		
85	90	95	
Asp Trp Tyr Pro Val Tyr Gln Ile Asn	Ala Tyr Ile Arg Glu Ala Asp		
100	105	110	
Lys Leu Ala Gln Ile Tyr Ser Asp	Leu His Gln Asn Ile Gln Asp Arg		
115	120	125	
Phe Asn Glu Ala Gly Ile Glu Ile	Met Ser Pro His Tyr Met Ala Met		
130	135	140	
Arg Asp Gly Asn Glu Ser Thr Ile Pro	Lys Asp Asp Leu Arg Pro Lys		
145	150	155	160
Thr Asp Lys			

<210> 10341

<211> 333

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (270), (304), (309)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10341

Phe Ile Ile Leu Leu Pro Ile Lys Tyr	Glu Lys Ser Leu Phe Ser Ser		
1	5	10	15
Leu Tyr Ile Thr Leu Ser His Ile Ala	Ser Val Arg Gly Lys Ser Val		
20	25	30	
Ala Tyr Leu Ile Asn Lys Leu Phe Ser	Asn Tyr Phe Pro Glu Ala Leu		
35	40	45	
Gln Ala Gln His Ser Tyr Phe Lys	Leu Ile Pro Thr Ser Ser Glu Gly		
50	55	60	
Gly Asp Arg Pro Arg Pro Asp His	Ser Leu Lys Lys Gln Gln Ile Leu		

65	70	75	80
Asn Ile Met Lys Ser Phe Lys Ile Met		Leu Ile Thr Val Leu Ser Val	
85		90	95
Met Thr Leu Ser Cys Ser Glu Lys Thr Thr Glu Ile Pro Glu Thr			
100	105	110	
Glu Leu Lys Asn Ile Ser Cys Ser Thr Gln Leu Val Thr His Ser Ser			
115	120	125	
Ala Gln Thr Arg Gly Ala Ala Pro Thr Thr Leu Asn Glu Asn Asp Phe			
130	135	140	
Val Leu Tyr Ala Phe Lys Lys Asn Gly Glu Gly Asn Phe Ser Tyr Glu			
145	150	155	160
Glu Ala Lys His Glu Thr Ser Val Ile Asp Gly Gly Val Trp Lys Tyr			
165	170	175	
Asn Ala Ala Phe Pro Val Gly Thr Tyr Lys Phe Ile Ala Phe Tyr Asn			
180	185	190	
Leu Asp Glu Lys Asn Gln Ala Ala Leu Asn Thr Thr Ile Thr Gly Ile			
195	200	205	
Ser Asn Gln Thr Trp Glu Asn Ile Leu Lys Ser Ile Val Ile Thr His			
210	215	220	
Phe Pro Ser Ala Thr Asp Gln Tyr His Glu Asp Met Asn Glu Ile Phe			
225	230	235	240
Cys Gly Lys Thr Lys Asp Ala Ile Asp Ile Ser Ser Gly Val Gly Gly			
245	250	255	
Asp Asp Asn Glu Ile Lys Ile Lys Leu Thr Leu Glu Arg Xaa Val Ser			
260	265	270	
Arg Ile Asp Ile Lys Phe Ile Lys Val Ala Ser Asp Asp Asp His Ile			
275	280	285	
Glu Val Pro Tyr Ala Thr Gly Asn Asn Phe Gly Gly Thr Ser Thr Xaa			
290	295	300	
Ser Trp Thr Ser Xaa Ile Phe Thr Ser Ala Asn Val Pro Leu Lys Tyr			
305	310	315	320
Asn Pro Asn Gly Glu Asn Pro Asp Tyr Val Thr Gly Val			
325	330		

<210> 10342

<211> 300

<212> PRT

<213> B.fragilis

<400> 10342

Leu Asn Ser Lys Ile Val Met Ala Lys Glu Ile Leu Phe Asn Ile Glu			
1	5	10	15
Ala Arg Asp Gln Leu Lys Lys Gly Val Asp Ala Leu Ala Asn Ala Val			
20	25	30	
Lys Val Thr Leu Gly Pro Lys Gly Arg Asn Val Ile Ile Glu Lys Lys			
35	40	45	
Phe Gly Ala Pro His Ile Thr Lys Asp Gly Val Thr Val Ala Lys Glu			
50	55	60	
Ile Glu Leu Thr Asp Ala Tyr Gln Asn Thr Gly Ala Gln Leu Val Lys			
65	70	75	80
Glu Val Ala Ser Lys Thr Gly Asp Asp Ala Gly Asp Gly Thr Thr Thr			
85	90	95	
Ala Thr Val Leu Ala Gln Ala Ile Ile Ala Glu Gly Leu Lys Asn Val			
100	105	110	
Thr Ala Gly Ala Ser Pro Met Asp Ile Lys Arg Gly Ile Asp Lys Ala			
115	120	125	
Val Ala Lys Val Val Asp Ser Ile Lys His Gln Ala Glu Lys Val Gly			
130	135	140	
Asp Asn Tyr Asp Lys Ile Glu Gln Val Ala Thr Val Ser Ala Asn Asn			

145	150	155	160
Asp Pro Val Ile Gly Lys Leu Ile Ala Asp Ala Met Arg Lys Val Ser			
165	170	175	
Lys Asp Gly Val Ile Thr Ile Glu Glu Ala Lys Gly Thr Asp Thr Thr			
180	185	190	
Ile Gly Val Val Glu Gly Met Gln Phe Asp Arg Gly Tyr Leu Ser Ala			
195	200	205	
Tyr Phe Val Thr Asn Thr Glu Lys Met Glu Cys Glu Met Glu Lys Pro			
210	215	220	
Tyr Ile Leu Ile Tyr Asp Lys Lys Ile Ser Asn Leu Lys Asp Phe Leu			
225	230	235	240
Pro Ile Leu Glu Pro Ala Val Gln Ser Gly Arg Pro Leu Leu Gly Ile			
245	250	255	
Ala Glu Asp Val Asp Ser Glu Thr Val Ala Thr Leu Val Gly Asn Arg			
260	265	270	
Leu Arg Ser Gln Leu Lys Asn Cys Ala Val Lys Ala Arg Gly Phe Gly			
275	280	285	
Asp Arg Arg Lys Lys Met Val Glu Lys Phe Pro Phe			
290	295	300	

<210> 10343

<211> 93

<212> PRT

<213> B.fragilis

<400> 10343

Lys Val Thr Met Asn Ile Lys Pro Leu Ala Asp Arg Val Leu Ile Leu			
1	5	10	15
Pro Ala Pro Ala Glu Glu Lys Thr Ile Gly Ile Ile Ile Pro Asp			
20	25	30	
Thr Ala Lys Glu Lys Pro Leu Lys Gly Glu Val Val Ala Val Gly His			
35	40	45	
Gly Thr Lys Asp Glu Glu Met Val Leu Lys Ala Gly Asp Thr Val Leu			
50	55	60	
Tyr Gly Lys Tyr Ala Gly Thr Glu Leu Glu Val Glu Gly Lys Lys Tyr			
65	70	75	80
Leu Ile Met Arg Gln Ser Asp Val Leu Ala Val Leu Gly			
85	90		

<210> 10344

<211> 123

<212> PRT

<213> B.fragilis

<400> 10344

Ser Thr Cys Ser Pro Cys Trp Ala Phe Thr Val Asp Gly Ser Arg Ala			
1	5	10	15
Cys Ser Leu Asn Val Glu Ala Val Pro Thr Glu Gly Thr Tyr Asp Phe			
20	25	30	
Thr Gly Gly Thr Leu Ser Val Asn Glu Gly Ser Gly Thr Val Ser Ser			
35	40	45	
Lys Glu Asn Met Leu Leu Leu Pro Gly Arg Leu Glu Glu Arg Arg			
50	55	60	
Ala Gln Ile Arg Tyr Leu Asp Arg Thr Tyr Asp Trp Tyr Leu Pro Ala			
65	70	75	80
Asn Thr Phe Glu Ala Gly Lys Arg Tyr Asp Tyr Ala Leu Thr Leu Ser			
85	90	95	
Lys Glu Gly Val Leu Ile Leu Ser Gly Val Ser Ala Arg Pro Trp Glu			
100	105	110	

Thr Gly Gly Asp Tyr Thr Gly Thr Ile Gln Pro
115 120

<210> 10345

<211> 227

<212> PRT

<213> B.fragilis

<400> 10345

Ser Gly Ile Thr Ser Gly Ser Ser Glu Arg Glu Leu Arg Ser Arg Tyr
1 5 10 15
Asn Ser Arg Leu Leu Pro Gly Glu Arg Lys Asn Leu Pro Cys Arg Lys
20 25 30
Arg Arg Lys Arg Lys Tyr Gly Pro Gly Ser Ala Lys Pro Trp Ile Val
35 40 45
Cys Pro Gly His Arg Pro Ala Gly Asp Ser Thr Arg Ser Gly Ser Ser
50 55 60
Gly Arg Lys Arg Gly Met Ser Ser Arg His Ser Cys Thr Pro His Arg
65 70 75 80
Pro Val Trp Ser Gly Ser Thr Leu Lys Met Gln Leu Ala Glu Asn Cys
85 90 95
Leu Thr Asp Asp Gly Gln Arg Ile Arg Lys Gly Thr Pro Val Phe Gly
100 105 110
Glu Val Thr Gly Ile Asp Gly Glu Arg Val Leu Val Lys Ile Thr Ser
115 120 125
Val Asn Leu Gly Gly Asn Ile Leu Pro Phe Glu Lys Gln Val Tyr Ser
130 135 140
Glu Asp Ala Ile Gln Gly Ile Tyr Val Pro Gly Asn Val Lys Ala Glu
145 150 155 160
Thr Ala Gln Glu Ala Gly Ala Ala Gly Ile Ser Gly Ala Asn Thr Asn
165 170 175
Ile Ser Gly Gly Phe Asp Met Gly Ser Gln Leu Val Ala Gly Ala Ala
180 185 190
Asn Ser Val Ile Asn Ala Thr Lys Ser Ala Ala Ser Lys Asn Ile Arg
195 200 205
Lys Val Lys Val Thr Ile Lys Thr Asn Tyr Arg Ile Leu Leu Arg Gln
210 215 220
Pro Lys Glu
225

<210> 10346

<211> 60

<212> PRT

<213> B.fragilis

<400> 10346

Met Glu Thr Ala Phe Ala Gly Tyr Gly Met Asp Pro Asp Ala Lys Ala
1 5 10 15
Ala Ala Leu Pro Glu Pro Val Phe Gln Gly Thr Gly Glu Arg Asp Leu
20 25 30
Val Gly Tyr Ser Val Pro Gly Glu Tyr Ile Pro Val Val Phe Gln Cys
35 40 45
Leu Gln Ala Phe Ala Pro Val Gln Cys Leu Val Glu
50 55 60

<210> 10347

<211> 327

<212> PRT

<213> B.fragilis

<400> 10347

Leu Ile Ile Tyr Phe Phe Gln Met Lys Met Lys Thr Ser Phe Phe Leu
 1 5 10 15
 Ser Ala Val Met Ala Ala Gly Leu Leu Ala Ser Cys Ser Asn Ser Glu
 20 25 30
 Glu Val Phe Asn Glu Gln Val Thr Asp Gly Glu His Ser Gly Ala Gln
 35 40 45
 Leu Asn Ile Val Pro Thr Val Ser Ser Glu Ser Thr Glu Thr Arg Ala
 50 55 60
 Ser Phe Asp Pro Lys Thr Asp Trp Ala Ala Gly Asp Gly Ala Gly Leu
 65 70 75 80
 Phe Met Tyr Lys Val His Gly Trp Gly Asp Ala Tyr Pro Arg Tyr Asp
 85 90 95
 Ala Gln Asn Asn Lys Ser Thr Arg Gln Ala Asn Gly Trp Ser Gln Ala
 100 105 110
 Ser Pro Val Tyr Leu Leu Val Asp Lys Ala Thr Ile Trp Ala Tyr Tyr
 115 120 125
 Pro Tyr Asn Gln Ala Val Thr Asp Gly Thr Lys Ile Pro Val Pro Ile
 130 135 140
 Asn Val Gly Thr Ser Val Asp Tyr Met Trp Gly Lys Ser Thr Asn Gln
 145 150 155 160
 Val Ser Val Ile Glu Thr Asp Ala Arg Ile Pro Met Lys His Ala Leu
 165 170 175
 Ser Gln Phe Val Val Arg Leu Lys Val Ser Pro Glu Tyr His Asn Asp
 180 185 190
 Gly Asn Leu Thr Ser Ala Lys Leu Lys Ala Thr Ala Ser Lys Phe Ala
 195 200 205
 Thr Thr Gly Thr Met Asn Leu Asn Asp Gly Gly Lys Ile Thr Phe Gln
 210 215 220
 Pro Thr Ser Thr Glu Leu Thr Trp Ser Pro Asn Thr Thr Val Pro Ala
 225 230 235 240
 Gln Gly Gln Gln Ala Val Asp Tyr Ala Ala Ala Ile Tyr Pro Met Thr
 245 250 255
 Leu Ala Ala Gly Glu Val Ser Leu Glu Val Val Ile Asp Gly Ala Thr
 260 265 270
 Tyr Thr Tyr Ala Ile Pro Gln Ile Thr Trp Glu Ala Gly Lys Arg Tyr
 275 280 285
 Ile Tyr Ser Ile Thr Met Arg Ser Asn Asp Ala Glu Ile Gly Gly Lys
 290 295 300
 Asn Gly Gln Ser Val Thr Ile Glu Gly Trp Thr Ser Thr Glu Glu Asp
 305 310 315 320
 Ile Thr Leu Val Pro Val Lys
 325

<210> 10348

<211> 224

<212> PRT

<213> B.fragilis

<400> 10348

Thr Asn Gly Tyr Lys Leu Tyr Asn Glu Thr Phe Met Lys Ala Thr Lys
 1 5 10 15
 Ser Ile Leu Asn Ile Gln Ser Ile Leu Lys Asp Phe Ser Gly Leu Ala
 20 25 30
 Glu Ala Arg Lys Ser Tyr Thr Leu Arg Thr Arg Leu Val Phe Ile Phe
 35 40 45
 Cys Gly Ile Thr Ile Ala Met Val Leu Phe Phe Ala His Ser Val Val
 50 55 60

Asn Asn Ala Met Asn Lys Ile Leu Val Val Asn Glu Gly Gly Glu Phe
 65 70 75 80
 Val His Phe Lys Ser Met Gln Gln Asp Leu Leu Tyr Glu Ser Leu Leu
 85 90 95
 Lys Ser His Cys Arg Arg Thr Ala Tyr Phe Leu Asn Ser Phe Asp Arg
 100 105 110
 Leu Ser Leu Gln Glu Asn Arg Ala Arg Ala Leu Phe Leu Val Asn Lys
 115 120 125
 Pro Asp Ala Asn Thr Val Phe Ala Lys Tyr Gln Ala Asp Arg Ala Tyr
 130 135 140
 Gly Asp Ala Leu Glu Leu Gly Val Val Tyr Lys Thr Glu Phe Glu Lys
 145 150 155 160
 Ile Ile Asp Ile Arg Ala Asp Gly Glu Tyr His Val Arg Phe Ser
 165 170 175
 Ser Ile Leu Ser Ile Ile Asn Gly Asp Glu Thr Arg Lys Val Arg Ile
 180 185 190
 Leu Ser Glu Gly Thr Ala Ile His Ala Thr Pro Arg Phe Pro Glu Asn
 195 200 205
 Thr Ser Gly Phe Phe Arg Thr Tyr Asp Gln Gln Tyr Glu Leu Leu
 210 215 220

<210> 10349

<211> 397

<212> PRT

<213> B.fragilis

<400> 10349

Thr Ala Phe Asn Asn Ile Asn Ile Glu Val Lys Phe Asn Met Lys Pro
 1 5 10 15
 Asn Lys Ile Tyr Ile Thr Thr Leu Leu Leu Phe Phe Leu Ser Gly
 20 25 30
 Arg Ala Gln Lys Ile Glu Glu Leu Thr Ala Val Pro Leu Gln Ile Gly
 35 40 45
 Tyr Glu Lys Thr Leu His Leu Ile Phe Pro Thr Glu Val Lys Tyr Tyr
 50 55 60
 Ser Ile Gly Gly Asp Tyr Val Ile Gly Glu Lys Val Val Asn Cys Pro
 65 70 75 80
 Gly Ile Ile Arg Leu Lys Ala Ala Glu Glu Asn Phe Pro Gly Glu Thr
 85 90 95
 Thr Leu Ser Val Val Thr Ala Asp Thr Lys Phe Tyr Ser Tyr Ser Ile
 100 105 110
 Ser Tyr Asn Ala His Pro Ala Gln Ser Tyr Val Arg Ile Gly Gly Glu
 115 120 125
 Ala Pro Thr Pro His Thr Leu Pro Val Gly Lys Glu Lys Gln Leu Phe
 130 135 140
 Leu Ile Phe Pro Ala Gly Ile Thr Tyr Val Asp Tyr Gly Ser Thr Asn
 145 150 155 160
 Val Glu Val Asp Lys Ala Glu Gly Val Asp Asn Ile Leu Ala Val Lys
 165 170 175
 Ala Val Gln Pro Tyr Lys Glu Asp Thr Asn Ile Ser Val Val Leu Glu
 180 185 190
 Gly Gly Lys Phe Tyr Thr Phe Asp Leu Arg Tyr Val Pro Ala Pro Glu
 195 200 205
 Arg Phe Ser Phe Val Ile Asp Lys Glu Asp Thr Gln Arg Val Ala Ile
 210 215 220
 Leu Asp Glu Lys Glu Arg Ser Tyr Gly Gln Lys Glu Arg Ile Arg Glu
 225 230 235 240
 Ala Val Ala Lys Arg Ala Pro Leu Asp Leu Gly Leu Arg Asp Lys Asn
 245 250 255

Ser Gly Met Glu Phe Glu Val Gly Asn Ile Phe Ile Asp Gly Asp Val
 260 265 270
 Leu Leu Leu Arg Met Thr Leu Thr Asn Arg Thr Gln Ile Gly Tyr Thr
 275 280 285
 Thr Asp Phe Met Arg Phe Tyr Ile Gln Asp Ala Lys Ile Arg Lys Lys
 290 295 300
 Thr Ala Val Gln Gln Leu Glu Gln Asn Ile Leu Phe Thr Phe Asp Tyr
 305 310 315 320
 Pro Glu Glu Ile Pro Ala His Glu Ser Arg Thr Phe Thr Val Ala Met
 325 330 335
 Asn Lys Phe Thr Ile Pro Asp Lys Lys Arg Leu Ile Ile Glu Ile Gln
 340 345 350
 Glu Arg Asn Gly Gly Arg His Phe Leu Tyr Lys Leu Lys Asn Lys Ser
 355 360 365
 Leu Leu Thr Ala Glu Glu Val Phe Arg Ser Arg Lys Gln Gln Glu Thr
 370 375 380
 Glu Asp Glu Ala Asp Lys Ile Leu Arg Arg Ile Ala Arg
 385 390 395

<210> 10350

<211> 75

<212> PRT

<213> B.fragilis

<400> 10350

Thr Thr Thr Lys Asn Lys Asn Tyr Asn Arg Met Glu Thr Ile Trp Glu
 1 5 10 15
 Lys Val Asp Tyr Leu Gly Arg Ile Leu Cys Cys Ile Ile Met Gly Ile
 20 25 30
 Ala Tyr Ile Leu Ile Met Ile Ala Pro Leu Tyr Ala Ser Arg His Glu
 35 40 45
 Gln Ser Gly Gln Arg Ser Asp Glu Lys Ala Ser Val Asp Gly Glu Glu
 50 55 60
 Lys Val Pro Asp Asn Gly Pro Glu Pro Glu Lys
 65 70 75

<210> 10351

<211> 810

<212> PRT

<213> B.fragilis

<400> 10351

Arg Arg Asn Lys Met Lys Glu Glu Glu Ala Tyr Ser Ile Leu Asp Ile
 1 5 10 15
 Ile Ser Glu Ser Asp Gly Gln Ser Val Ile Leu Thr Arg Ser Gly Ser
 20 25 30
 Ile Cys Ile Pro Phe Glu Leu Arg Gln Pro Glu Cys Tyr Ser Leu Ser
 35 40 45
 Pro Glu Asp Ile Asp Glu Arg Asp Gly Met Tyr Arg Glu Ala Phe Arg
 50 55 60
 His Met Pro Asp Gly Ala Tyr Val His Lys Gln Asp Val Phe Leu Lys
 65 70 75 80
 Lys Glu Tyr His Pro Gly Lys Gly Thr Gly Ser Phe Leu Asp Arg Ala
 85 90 95
 Asp Ala Arg His Phe Glu Gly Arg Leu Tyr Ile Asp His Thr Cys Ile
 100 105 110
 Leu His Phe Val Leu Ala Gly Leu Lys Ser Leu Glu Lys Ala Tyr Val
 115 120 125
 Ser Ser Pro Leu Ala Tyr Lys Glu His Leu His Arg Glu Asp Tyr Arg

130	135	140
Lys Leu Glu Ala Phe Leu Glu Gly Val Asp Asn Ala Val Ser Ile Leu		
145	150	155
Gln Asn Met Arg Gly Asn Ser Val Leu Pro Met Ser Cys Glu Gly Ile		160
165	170	175
Ser Gly Phe Thr Arg Ala Tyr Ser Gly Leu Phe Gly Asp Thr Asp Ala		
180	185	190
Val Val Asp Ile His Val Asp Gly Ser Leu His Val Gly Lys Asn His		
195	200	205
Ala Arg Cys Tyr Ala Val Cys Asp Glu Thr Phe Leu Pro Glu Gly Asn		
210	215	220
Ile Glu Ser Tyr Val Arg Asp Glu Ser Leu Pro Pro Ala Ala Ser Gln		
225	230	235
240		
Leu Tyr His Pro Leu Met Glu Gln Leu Gly Met Tyr Leu Pro Tyr Asn		
245	250	255
His Ile Val Asn Gln Val Ile Tyr Phe Glu Gly Asn Glu Arg Leu Arg		
260	265	270
Ser Arg Ile Ala Arg Asn Ile Asp Ile Tyr Gly Ser Asn Ser Ser Met		
275	280	285
Asn Lys Gly Ile Glu Arg Glu Phe Lys Glu Leu Glu Lys Leu Gln Thr		
290	295	300
Glu Ile Leu Glu Glu Asn Gln Met Leu Val Arg Ser Phe Phe Ser Val		
305	310	315
320		
Cys Val Phe Asp Gly Ser Asp Thr Glu Leu Glu Lys Ala Asp Lys Arg		
325	330	335
Ile Arg Glu Ile Leu Asn Leu Asn Arg Phe Lys Tyr Tyr Ile Pro Gly		
340	345	350
Tyr Gly Asn Leu Ala Arg Met His Phe Ala Cys Val Pro Gly Gln Ile		
355	360	365
Ser Leu Met Pro Val Glu Tyr Leu Phe Leu Thr Thr Leu Pro Ile Ala		
370	375	380
Leu Cys Phe Phe Leu Gln Cys Gly Lys Phe Ser Asn Asp Ala Glu Gly		
385	390	395
400		
Ile Tyr Val His Asp Arg Met Tyr Gln Val Pro Leu Arg Lys Asp Ile		
405	410	415
Trp Asp Ala Ala Lys Arg Val Asn Ala Arg Asn Gly Met Val Ile		
420	425	430
Ala Gly Thr Gly Gly Lys Ser Ala Phe Thr Leu Asn Phe Thr Gln		
435	440	445
Gln Leu Ile Glu Gln Asp Tyr Thr Ile Val Val Glu Phe Gly Asn		
450	455	460
Ser Phe Ser Gln Leu Cys Lys Leu Tyr Pro Asp Ile Ser Leu His Val		
465	470	475
480		
Asp Tyr Asp Gly Lys Thr Pro Leu Gly Ile Asn Pro Phe Asp Leu Gln		
485	490	495
Gly Gly Glu Pro Asp Asn Asn Asp Leu Glu Thr Leu Ser Gly Ile Val		
500	505	510
Gln Arg Tyr Trp Lys His Met Phe Thr Lys Asp Glu Ser Glu Lys Glu		
515	520	525
Val Ala Leu Thr Arg Phe Ile Gln Asp Tyr Tyr Glu His Val Arg Gln		
530	535	540
Gly His Asn Phe Glu Ser Phe Tyr Asn Tyr Val Ile Asp Asn Tyr Asp		
545	550	555
560		
Glu Ile Leu Glu Arg Lys His Ile Pro Gly Thr Tyr Phe Thr Ile Glu		
565	570	575
Ser Phe Lys Leu Asn Cys Gly Glu Phe Met Pro Gly Gln Arg Tyr Glu		
580	585	590
Asn Val Cys Lys Asp Met Lys Ile Asp Phe Ser Gly Lys Lys Phe Ile		
595	600	605

Val Phe Glu Leu Thr Arg Ile Lys Gln Asp Arg Phe Leu Ser Asn Leu
 610 615 620
 Val Met Ser Met Ile Phe Thr Val Ile Gln Lys Lys Leu Leu Ser Asp
 625 630 635 640
 Arg Arg Lys Arg Gly Ile Leu Ile Phe Asp Glu Tyr Ala Glu Thr Ala
 645 650 655
 Gln Met Val Asp Thr Ala Thr Gly Ser Gly Ile His Ser Ser Val Ala
 660 665 670
 Phe Cys Tyr Gln Lys Ile Arg Lys Glu Asn Gly Ala Val Tyr Thr Ile
 675 680 685
 Val Gln Thr Pro Asp Gln Leu Pro Asp Asp Glu Asn Thr Lys Asn Ile
 690 695 700
 Ile Ser Asn Thr Asp Met Leu Phe Val Leu Pro Thr Lys Glu Val Ile
 705 710 715 720
 Tyr Arg Thr Ile Ile Asp Lys Phe Lys Leu Thr Gln Pro Gly Gln Ile
 725 730 735
 Ala Leu Met Lys Ser Met Arg Asn Asn Phe Ala Gly Ser Arg Pro Tyr
 740 745 750
 Ser Glu Cys Phe Met Arg Met Gly Glu Asn Tyr Ala Thr Val Thr Arg
 755 760 765
 Leu Glu Phe Ser Arg Glu Lys Phe Leu Ala Phe Gln Thr Glu Gly Glu
 770 775 780
 Ile Leu Ser Asp Leu Glu Asp Lys Thr Gly Ser Gly Lys Ser Met Gln
 785 790 795 800
 Glu Ala Ile Glu Glu Tyr Ile Asn Glu His
 805 810

<210> 10352

<211> 193

<212> PRT

<213> *B. fragilis*

<220>

<221> UNSURE

<222> (161)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10352

Ser Arg Gln Asn Ile Lys Glu Asp Ser Pro Met Lys Leu Leu Leu Pro
 1 5 10 15
 Leu Leu Leu Phe Cys Leu Pro Phe Asn Gly Ser Asn Gly Gly Lys Glu
 20 25 30
 Leu Leu Asp Lys Ala Leu Asp Arg Cys Glu Arg Leu Glu Thr Leu Glu
 35 40 45
 Asn Tyr Arg Asp Ile Leu Ser Arg Tyr Gly Val Ser Asp Lys Ile Pro
 50 55 60
 Leu Ala Cys Pro Leu Lys Asp Arg Phe Arg Lys Ser Ser Gly Phe Gly
 65 70 75 80
 Ile Arg Ile His Pro Ile Thr Gly Lys Arg Ser Phe His Ser Gly Ile
 85 90 95
 Asp Met Ala Val Gly Leu Ala Ala Pro Val Tyr Ala Thr Ala Ser Gly
 100 105 110
 Thr Val Ser Phe Ala Gly Arg Lys Gly Gly Tyr Gly Arg Cys Val Ile
 115 120 125
 Ile Arg His Ser Tyr Gly Phe Glu Thr Leu Tyr Ala His Leu Ala Ala
 130 135 140
 Tyr Tyr Thr Thr Glu Gly Gln Lys Val Asp Lys Gly Ala Val Ile Ala
 145 150 155 160
 Xaa Ala Gly Ser Thr Gly Lys Ser Thr Gly Tyr His Leu His Tyr Glu

165	170	175
Ile Arg Lys Asn Gly Lys Pro Ile Lys Pro Tyr Trp Tyr Gly Tyr Asp		
180	185	190
Asp		

<210> 10353

<211> 204

<212> PRT

<213> B.fragilis

<400> 10353

Gln Lys Met Lys Ile Lys Val Tyr Lys His Ile Ala Met Phe Leu Leu		
1 5 10 15		
Pro Ala Ala Leu Thr Gly Cys Ser Gly Lys Glu Asp Ser Leu Pro Gly		
20 25 30		
Thr Gly Glu Ala Gly Leu Glu Ile Glu Asn Cys Phe Ser Arg Ser Thr		
35 40 45		
Gly Thr Asp Thr Gly His Val Pro Val Lys Asp Phe Gly Met Val Leu		
50 55 60		
Leu Asp Glu Thr Gly Ser Tyr Thr Gly Val Ser Asn Pro Leu His		
65 70 75 80		
Val Thr Tyr Gly Glu Ser Trp Asn Phe Pro Gln Val Thr Leu Thr Gln		
85 90 95		
Lys Thr Cys Arg Leu Phe Ala Phe Ser Pro Phe Arg Ser Ile Pro Gly		
100 105 110		
Lys Glu Val Ala Val Ser Leu Ser Pro Gln Thr Asp Tyr Leu Ala Ser		
115 120 125		
Asp Glu Val Arg Leu Asp Trp Gln Asn Pro Gln Ala Ser Ile Glu Met		
130 135 140		
Lys His Leu Leu Ser Leu Leu Gly Ile Tyr Arg Arg Arg Glu Pro Gly		
145 150 155 160		
Met Gln Pro Glu Cys Gly Ser Arg Thr Asp Arg Gly His Ile Arg Leu		
165 170 175		
Tyr Arg Arg Tyr Ile Val Arg Lys Arg Gly Lys Arg His Arg Phe Phe		
180 185 190		
Gln Gly Glu His Ala Ala Ala Pro Ala Arg Gln Ala		
195 200		

<210> 10354

<211> 73

<212> PRT

<213> B.fragilis

<400> 10354

Ala Ser Arg Phe Ile Glu Gln His His Ala Glu Val Leu Tyr Arg Asn		
1 5 10 15		
Met Ala Arg Ile Arg Thr Gly Thr Ala Ala Glu Thr Val Phe Tyr Leu		
20 25 30		
Lys Ser Arg Leu Ser Cys Pro Gly Glu Gly Ile Phe Leu Ala Gly Thr		
35 40 45		
Ala Arg Lys Gly Arg Arg Gln Lys Lys His Gly Tyr Val Phe Ile His		
50 55 60		
Phe Tyr Phe His Phe Leu Leu Phe Val		
65 70		

<210> 10355

<211> 140

<212> PRT

<213> B.fragilis

<400> 10355

Leu	Arg	Val	Asp	Pro	Glu	Gln	Gly	Arg	Gly	Ala	His	Thr	Leu	Arg	Cys
1				5				10					15		
Glu	Cys	Pro	Ser	Leu	Gly	Asn	Gly	Arg	Arg	Leu	Tyr	Arg	Asn	His	Thr
				20				25					30		
Thr	Leu	Lys	Thr	Thr	Ile	Met	Lys	Arg	Lys	Phe	Leu	Leu	Ser	Ala	Phe
					35			40					45		
Leu	Phe	Ala	Ser	Thr	Leu	Arg	Gly	Tyr	Ala	Gln	Asp	Ala	Arg	Gly	Ala
					50			55					60		
Met	Asn	Gln	Ile	Leu	Asp	Gly	Tyr	Thr	Leu	Pro	Ile	Phe	Ala	Ala	Cys
					65			70					80		
Met	Leu	Val	Gly	Leu	Ala	Leu	Gly	Val	Val	Gln	Gln	Leu	Asp	Asn	Ile
					85			90					95		
Ile	Asp	Lys	Glu	Asn	Arg	Gly	Thr	Arg	Arg	Asp	Gly	Leu	Phe	Ala	Leu
					100			105					110		
Gly	Trp	Tyr	Val	Gly	Phe	Ser	Leu	Leu	Ala	Gly	Val	Val	Ile	Thr	Ala
					115			120					125		
Ala	Lys	Ala	Ala	Ile	Ser	Gly	Ile	Lys	Leu	Thr	Ile				
					130			135					140		

<210> 10356

<211> 62

<212> PRT

<213> B.fragilis

<400> 10356

Asn	Arg	Cys	Asp	Met	Glu	Thr	Ile	Gln	Glu	Ile	Asp	Met	Ile	Lys	
1				5				10					15		
Glu	Leu	Ser	Gly	Arg	Asp	Ile	Leu	Phe	Leu	Ser	Phe	Tyr	Cys	Gly	Phe
					20			25					30		
Ile	Leu	Ile	Leu	Ser	Ile	His	Arg	Ser	Asp	Glu	Lys	Ala	Ser	Val	Asp
					35			40					45		
Glu	Glu	Glu	Lys	Val	Pro	Asp	Asn	Gly	Pro	Glu	Pro	Glu	Lys		
				50			55					60			

<210> 10357

<211> 434

<212> PRT

<213> B.fragilis

<400> 10357

Lys	Arg	Cys	Asp	Met	Glu	Thr	Ile	Gln	Glu	Ile	Asp	Thr	Ile	Lys	
1				5				10					15		
Gln	Trp	Pro	Ser	Thr	Ile	Trp	Trp	Val	Met	Gly	Ala	Leu	Phe	Ile	Ile
					20			25					30		
Ser	Trp	Phe	Trp	Asp	Thr	Pro	Leu	Arg	Lys	Lys	Arg	Asn	Lys	Asp	Lys
					35			40					45		
Val	Thr	Asp	Asp	Lys	Asn	Asn	Leu	Lys	Ser	Ser	Asn	Met	Thr	Asp	
					50			55					60		
Lys	Lys	Glu	Leu	Arg	Gly	Asn	Leu	Met	Lys	Glu	Gly	Val	Ile	Leu	Trp
					65			70					80		
Thr	Val	Phe	Thr	Gly	Glu	Gly	Lys	Ala	Ala	Leu	Arg	Met	Asp	Asn	Glu
					85			90					95		
Ile	His	Ala	Glu	Asn	Gly	Lys	Ile	Gly	His	Gly	Arg	Leu	Leu	Ser	Pro
					100			105					110		
Asp	Val	Pro	Val	Leu	His	Glu	Ile	Leu	Thr	Pro	Asp	Asn	Ala	Tyr	Ser
					115			120					125		

Phe Leu Ser Leu Ser Glu Ile Gly Val Trp Ile Arg Ile Arg Met Arg
 130 135 140
 Leu Arg Tyr Pro Gly Ile Glu Asp Ser Ala Val Lys Gln Ser Glu Tyr
 145 150 155 160
 Glu Pro Glu Met Cys Phe Pro Ala Trp Ile Ala Gly Glu Lys Thr Gly
 165 170 175
 Arg Ile Ser Leu Phe Leu Gln Glu Pro Ser Thr Gly Ile Cys Ala Ile
 180 185 190
 Pro Asp Met Val Gly Ile Pro Gly Leu Pro Asp Leu Gln Pro Asp Ser
 195 200 205
 Val Pro Val Lys Val Glu Met Leu Ile Arg Lys Ala Ser Pro Leu Leu
 210 215 220
 Glu His Pro Glu Tyr Ser Glu Asp Ile Lys Lys Arg Ala Asp Arg Lys
 225 230 235 240
 Ser Asn Leu Met Lys Glu Gly Val Leu Val Trp Ile Met Phe Thr Ala
 245 250 255
 Gly Glu Lys Ala Val Leu Tyr Ala Asn Asp Arg Ile His Phe Thr Glu
 260 265 270
 Asp Gly Lys Tyr Val Pro Gly Lys Leu Leu Ser Ser Asp Ile Ser Pro
 275 280 285
 Phe His Gln Ile Tyr Asp Trp Asp Val Gln Tyr Pro Trp Ile Arg Ser
 290 295 300
 Lys Pro Glu Ile Ser Val Arg Tyr Arg Ile Arg Leu Arg Tyr Pro Gly
 305 310 315 320
 Ala Asn Asp Ala Gly Ile Glu Gln Ser Glu Tyr Glu Pro Glu Ala Cys
 325 330 335
 Phe Pro Ala Trp Ile Val Pro Gln Glu Gly Gln Thr Gly Leu Cys
 340 345 350
 Leu Glu Glu Pro Ser Thr Gly Gln Tyr Phe Ile Pro Asp Met Thr Gly
 355 360 365
 Leu Pro Gly Leu Pro Glu Leu Gln Pro Asp Gly Ile Pro Leu Arg Val
 370 375 380
 Glu Leu Leu Ile Arg Gln Ala His Trp Ile Ser Asp Val Ala Asp Pro
 385 390 395 400
 Ala Tyr Leu Lys Ile Ile Ser Tyr Ser Ala Ser Leu Lys Ala Phe Ser
 405 410 415
 Thr Lys Ile Ser Asp Asn Gln Glu Val Lys Ser Cys Asn Ile Gln Thr
 420 425 430
 Glu Ile

<210> 10358
 <211> 154
 <212> PRT
 <213> B.fragilis

<400> 10358
 Ala Leu Leu Asp Val Pro Glu Pro Pro Val Lys Thr Val Gln Arg Leu
 1 5 10 15
 Asn Ile Gln Ile Asn Val Ser Gly Asn Thr Ala Pro Leu Ala Gly Leu
 20 25 30
 Lys Gly Thr Leu Thr Gly Ile Ser Thr Gly Arg Tyr Leu Val Ser Arg
 35 40 45
 Glu Arg Thr Gly Asn Ala Ser Val Thr Ser Leu Phe Ala Arg Lys Pro
 50 55 60
 Glu Thr Asp Arg Trp Lys Thr Ser Leu Tyr Ala Phe Gly Phe Asn Pro
 65 70 75 80
 Ala Ala Glu Asn Ile Leu Ser Val Lys Ile Glu Met Asp Gly Lys Asp
 85 90 95

Ser Val Phe Asn Glu Glu Gln Lys Val Asp Leu Thr Pro Tyr Leu Arg
 100 105 110
 Gly Phe Asp Ser Asp Glu Leu Ser Leu Glu Leu Asp Leu His Ile Gly
 115 120 125
 Lys Glu Leu Thr Ile Gly Glu Pro Val Val Ile Pro Asp Trp Glu Asp
 130 135 140
 Ile Pro Glu Thr Glu Leu Pro Asn Tyr Asn
 145 150

<210> 10359

<211> 283

<212> PRT

<213> B.fragilis

<400> 10359

Gly Gly Lys Glu Asn Ser Gln Asp Leu Pro Gly Asn Lys Pro Val Arg
 1 5 10 15
 Thr Ala Gln Lys Gly Ile Glu Val Arg Gly Met Glu Glu Ala Tyr Gly
 20 25 30
 Asn Leu Asn Ala Ala Tyr Leu Gln Ile Lys Gly Met Val Val Ile Glu
 35 40 45
 Gly Phe Tyr Ala Leu Ile Ala Gly Phe Val Ile Thr Thr Phe Val Phe
 50 55 60
 Lys Leu Val Gly Ile Ile Lys Glu Met Thr Asn Glu Gly Lys Gly Phe
 65 70 75 80
 Asn Ala Arg His Phe Tyr Glu Leu Gly Arg Glu Tyr Ile Phe Cys Ile
 85 90 95
 Gly Leu Ile Cys Ile Met Pro Val Leu Leu Gly Ala Leu Glu Thr Val
 100 105 110
 Leu Ala Tyr Gly Ala Asp Glu Leu Met Lys Ser Leu Ala Ser Gly Gly
 115 120 125
 Val Tyr Asn Pro His Asn Ile Trp Lys Asp Pro Ile Ser Ala Met Leu
 130 135 140
 Asp Glu Leu Met Asn Gly Asp Ile Thr Asp Ile Ala Val Asn Gly Ile
 145 150 155 160
 Asp Thr Leu Lys Trp Ser Leu Ile Ser Gly Thr Val Gly Ser Leu Phe
 165 170 175
 Gly Val Ala Tyr Asp Tyr Ile Met Leu Leu Phe Leu Cys Thr Arg Tyr
 180 185 190
 Leu Ile Leu Leu Leu Glu Ile Ile Ser Pro Ile Ala Ile Ala Cys
 195 200 205
 Leu Tyr Asn Lys Asp Thr Arg Ser Ser Phe Tyr Thr Trp Val Lys Gln
 210 215 220
 Met Leu Gly Cys Tyr Met Leu Tyr Pro Gly Phe Ile Leu Ala Ser Val
 225 230 235 240
 Phe Ser Asp Leu Ile Val Thr Asn Tyr Val Leu Gln Arg Ser Trp Ser
 245 250 255
 Val Leu Leu Met Val Ile Phe Ser Phe Leu Leu Lys Leu Thr Met Leu
 260 265 270
 Gly Thr Val Lys Ala Thr Val Asn Lys Trp Leu
 275 280

<210> 10360

<211> 548

<212> PRT

<213> B.fragilis

<400> 10360

Pro Ala Gly Glu Pro Ser Gly Ser Pro Ile Lys Lys Arg Ile Met Val

1	5	10	15
Arg	Ala	Ile	Thr
Thr	Ile	Val	Cys
Leu	Leu	Leu	Leu
Leu	Ala	Phe	
20	25	30	
Ser	Cys	Ser	Arg
Glu	Asp	Thr	Gly
Pro	Gln	Glu	Thr
Ile	Pro	Gly	Ser
35	40	45	
Gly	Ile	Val	Thr
Phe	Thr	Ala	Met
Thr	Gly	Gln	Gly
Glu	Thr	Arg	Ser
50	55	60	
Ser	Gln	Glu	Gly
Ser	Phe	Glu	Thr
Gly	Asp	Ala	Ile
Ile	Gly	Val	Phe
65	70	75	80
Ile	Glu	Pro	Lys
Thr	Gly	Val	Tyr
Trp	Ala	Val	Asn
Asn	Asn	Lys	Tyr
85	90	95	
Tyr	Asp	Gly	Gln
Lys	Phe	Lys	Pro
Glu	Ala	Glu	Ala
Asp	Asp	Asn	Ile
100	105	110	
Val	Thr	Val	Gly
Thr	Asp	Phe	Asp
Phe	Tyr	Val	Tyr
Tyr	Tyr	Pro	Phe
115	120	125	
Ala	Gly	Gln	Thr
Asp	Ile	Thr	Gly
Ile	Ser	His	Thr
Ala	Gly	Asn	Gln
130	135	140	
Ser	Asp	Lys	Ser
Gly	Trp	Leu	Ser
Ala	Asp	Phe	Met
Thr	Ala	Thr	Tyr
145	150	155	160
Thr	Asp	Pro	Ile
Arg	Asn	Tyr	Thr
Val	Pro	Leu	His
Phe	Lys	His	Arg
165	170	175	
Met	Ser	Thr	Val
Glu	Val	Arg	Ile
Asp	Arg	Asn	Asp
Gly	Val	Arg	Glu
180	185	190	
Ala	Thr	Met	Glu
Asn	Val	Lys	Arg
Thr	Ser	Arg	Phe
Asn	Leu	Leu	Thr
195	200	205	
Gly	Gly	Ile	Thr
Thr	Asp	Glu	Ser
Arg	Gly	Ser	Cys
Gly	Thr	Met	His
210	215	220	
Tyr	Ser	Glu	Thr
Gly	Gly	Thr	Asp
Thr	Val	Phe	Arg
225	230	235	240
Gln	Arg	Leu	Thr
Thr	Ser	Ser	Asn
Tyr	Val	Ala	Leu
Thr	Gly	Thr	Thr
245	250	255	
Pro	Ile	Lys	Leu
Arg	Gly	Thr	Ser
Gly	Thr	Asp	Met
260	265	270	
Ile	His	Asn	Tyr
Arg	Met	Asp	Tyr
275	280	285	
Tyr	Ala	Pro	Gly
Gly	Gly	Thr	Thr
290	295	300	
Ser	Asn	Cys	Thr
Val	Ser	Ala	Ser
305	310	315	320
Gly	Trp	Tyr	Glu
Gly	Gly	Gly	Arg
Ile	Val	Ser	Gly
325	330	335	
Phe	Glu	Val	Leu
Leu	Ala	Asp	Arg
340	345	350	
Gly	Ser	Trp	Arg
Val	Thr	Leu	Thr
355	360	365	
Lys	Gly	Gly	Thr
Ser	Thr	Leu	Ser
370	375	380	
Val	Asn	Gly	Val
385	390	395	400
Gly	Gly	Thr	Glu
Gly	Asn	Val	Gly
405	410	415	
Glu	Asn	Asn	Thr
Ala	Ser	Ala	Arg
Arg	Ser	Cys	Val
420	425	430	
Gly	Gly	Ser	Ser
Ala	Thr	Ala	Thr
435	440	445	
Ser	Tyr	Val	Phe
Phe	Glu	Tyr	Ser
450	455	460	
Ala	Glu	Ala	Gly
465	470	475	480
Ser	Phe	Leu	Leu
Ser	Ile	Thr	Ser
Ser	Arg	Lys	

Thr Ile Gly Asn Ser Ile Lys Glu Leu Ser Trp Ser Ala Ser Gly Asp
 485 490 495
 Ser Trp Ile His Val Ser Gly Ser Ser Val Ser Tyr Asp Glu Asn Pro
 500 505 510
 Thr Lys Glu Ile Arg Ser Gly Ser Val Thr Leu Thr Gln Ala Glu Ser
 515 520 525
 Gly Lys Thr Leu Thr Leu Thr Val Arg Gln Lys Gly Lys Thr Ser Ile
 530 535 540
 Asp Ile Asn Pro
 545

<210> 10361

<211> 148

<212> PRT

<213> B.fragilis

<400> 10361

Gly Tyr Ile Arg Leu Leu Gln Ala Phe Gln Pro Cys Lys Tyr Lys Val
 1 5 10 15
 Gln Asp Thr Gly Val Val Asp Val Gln Ala Ser Phe Lys Val Ala Arg
 20 25 30
 Val Gly Thr Val Gln Glu Arg Ala Gly Ala Phe Ala Arg Val Val Leu
 35 40 45
 Phe Phe Lys Glu Tyr Ile Leu Phe Val Tyr Val Gly Thr Val Gly His
 50 55 60
 Val Pro Glu Gly Phe Pro Val His Pro Val Pro Phe Val Asp Val Phe
 65 70 75 80
 Arg Gly Lys Gly Ile Ala Leu Arg Leu Pro Glu Leu Glu Arg Asp Thr
 85 90 95
 Tyr Ala Ala Ala Pro Gly Gln Asp His Ala Leu Ser Ile Gly Leu Ala
 100 105 110
 Asp Asn Val Lys Tyr Ala Val Cys Leu Phe Leu Phe His Leu Val Ser
 115 120 125
 Ser Ser Glu Val Val Cys Leu Trp Leu Ser Tyr Ser Arg Ser Cys Arg
 130 135 140
 Thr Ser Ile Pro
 145

<210> 10362

<211> 204

<212> PRT

<213> B.fragilis

<400> 10362

Pro Thr Ile Arg Ala Leu Met Thr Arg Asp Gly Lys Ser Arg Ile Ala
 1 5 10 15
 Ile Leu Ala Gly Leu Gly Ile Val Val Val Leu Leu Val Trp Ala Phe
 20 25 30
 Ile Ala Ser Leu Pro Ala Ser Gly Ser Lys Glu Pro Glu Thr Gly Glu
 35 40 45
 Val Ile Leu Arg Thr Arg Ile Lys Asp Ser Phe Thr Leu Asp Asp Met
 50 55 60
 Leu Gln Lys Val Gly Lys Glu Asn Thr Ser Lys Ser Ala Ser Leu Ser
 65 70 75 80
 Gly Phe Asp Pro Val Thr Glu Glu Pro Ala Asp Thr Ala Gly Asn Glu
 85 90 95
 Arg Glu Ile Arg Arg Ile Gln Glu Leu Ile Arg Asp Asn Glu Arg Glu
 100 105 110
 Leu Gly Ala Gly Ile Thr Val Pro Val Gln Gln Pro Val Ala Ser Arg

115	120	125
Gly Lys Glu Lys Pro Ala Leu Gln Glu Lys Lys	Glu Glu Glu Val Arg	
130	135	140
Pro Gly Gln Arg Lys Ala Met Asp Ser Val Pro Arg Ala Pro Thr Arg		
145	150	155
Arg Gly Phe Asn Thr Val Arg Leu Val Arg Gln Glu Glu Arg Asn Val		160
165	170	175
Ile Lys Ala Phe Val His Ser Thr Gln Thr Gly Met Val Gly Phe His		
180	185	190
Pro Gln Asp Ala Ala Gly Arg Glu Leu Pro Asp Arg		
195	200	

<210> 10363

<211> 177

<212> PRT

<213> B.fragilis

<400> 10363

Asn Lys Lys Arg Met Lys Lys Leu Cys Leu Ser Leu Ile Val Met Met			
1	5	10	15
Thr Ala Asp Thr Val Ser Ala Gln Trp Ala Val Thr Asp Ala Gly Asn			
20	25	30	
Leu Ser Gln Asn Leu Lys Asn Leu Lys Glu Leu His Arg Gln Val Gly			
35	40	45	
Tyr Leu Lys Glu Gln Lys Ser Leu Leu Asp Glu Ser Leu Asp Met Met			
50	55	60	
Arg Lys Val Asn Ser Val Val Ser Asp Cys Glu Thr Thr Arg Tyr Ile			
65	70	75	80
Ile Glu Arg Gln Ala Arg Leu Ser Glu Lys Cys Val Asp Leu Leu Ser			
85	90	95	
Gly Lys Gln Leu Asn Pro Ser Thr Leu Gln Thr Leu Ile Gly Ser Ile			
100	105	110	
Glu Gln Ile Met Ala Gly Asn Arg Arg Leu Ile Gln Leu Ser Arg Thr			
115	120	125	
Ile Leu Ser Thr Ser Val Arg Met Asn Asp Ala Glu Arg Leu Ser Thr			
130	135	140	
Leu Gln Asn Ile Glu Arg Gln Thr Leu Glu Glu Arg Lys Ile Ala			
145	150	155	160
Arg Ile Ser Gln Val Ile Ser Gln Tyr Glu Gln Leu Lys Arg Ala Leu			
165	170	175	
Arg			

<210> 10364

<211> 151

<212> PRT

<213> B.fragilis

<400> 10364

Ala Phe Thr Ile Ile Asn Ile Met Pro Thr Asn Tyr Asn Gln Leu Leu			
1	5	10	15
Lys Asp Leu Glu Ile Gly Ser Val Tyr Ile Lys Ile Phe Ile Cys Phe			
20	25	30	
Leu Gly Cys Thr Phe Met Leu Tyr Pro Val Leu Phe Tyr Phe Thr His			
35	40	45	
Phe Phe Arg Glu Leu Ser Val Tyr Glu Gln Ile Phe Phe Ala Leu Gly			
50	55	60	
Ser Ser Ala Leu Tyr Thr Gly Leu Gly Val Pro Leu Ser Ile Thr Ser			
65	70	75	80

Ala Ile Arg Tyr Pro Gly Val Phe Tyr Leu Pro Leu Met Leu Leu Ser
 85 90 95
 Val Ser Val Ile Ala Thr Ile Tyr Ile Val Phe Phe Met Ala Arg Ser
 100 105 110
 Tyr Asp Pro Leu Thr Thr Leu Leu Trp Ile Leu Pro Thr Ser Tyr Leu
 115 120 125
 Leu Asn Leu Ile Thr Gly Val Ile Ser Ile Leu Arg Glu Lys Lys Tyr
 130 135 140
 Pro Lys Thr Glu Met Tyr Tyr
 145 150

<210> 10365

<211> 217

<212> PRT

<213> B.fragilis

<400> 10365

Glu Leu Val Leu Leu Val Ile Gly Thr Glu Glu Glu Thr Gly Arg Ile
 1 5 10 15
 Phe Arg Lys Ala Arg Gly Gly Met Asp Gly Gly Thr Leu Thr Gln Asp
 20 25 30
 Pro His Phe Pro Gly Leu Ile Ala Val Asp Asp Ala Gln Asp Gly Gly
 35 40 45
 Glu Pro Asp Met Val Leu Leu Thr Val Gly Ala Tyr Val Asp Asp Leu
 50 55 60
 Phe Lys Leu Arg Leu Val Asp Asn Ser Glu Phe Gln Arg Ile Ala Ile
 65 70 75 80
 Gly Thr Val Arg Leu Val Phe Gly Lys Tyr Gly Ile Cys Val Arg Leu
 85 90 95
 Ile Asp Gln Glu Gln Gly Thr Gly Thr Val Phe Leu Lys Gly Lys Pro
 100 105 110
 Val Glu Ala Val Gln Glu Ile Gly Arg Pro Ala Ala Val Ala Phe Gln
 115 120 125
 Glu Ala Phe Val Gln Gln Val Leu Leu His Gly Leu Glu Met Asp Glu
 130 135 140
 Phe Pro Ala Phe Val Asp His Gln Tyr Leu Val His Arg Ile Val His
 145 150 155 160
 His Ala Val Arg Glu Glu Gln Asp His Arg Asp Gly Tyr Pro Ala Glu
 165 170 175
 Asn Glu Tyr Gln Pro Gly Ala Gln Arg Ile Ala Leu Pro Gly Phe Gly
 180 185 190
 Gln Ala Gly Glu Ile Leu Glu Tyr Ala Leu Tyr Ile Glu Tyr Ala Phe
 195 200 205
 Gly Cys Phe His Glu Ser Phe Ile Ile
 210 215

<210> 10366

<211> 204

<212> PRT

<213> B.fragilis

<400> 10366

Asn Phe His Lys Arg Arg Pro Asn Gln Ser Asn Phe Phe Lys Lys Glu
 1 5 10 15
 Arg Asp Pro Arg Ile Leu Tyr Leu Gln Val Arg Gln Gln Gly Gln Pro
 20 25 30
 Gln Ala Lys Glu Arg Phe Arg Asp Leu Phe Val Ile Gly Cys Leu Thr
 35 40 45
 Ala Leu Arg Tyr Ser Asp Tyr Ser Thr Leu Thr Gln Asp Asn Leu Gln

50	55	60	
Gly Cys Phe Ile Val Lys	Arg Thr Arg Lys	Thr Asn Val Asp Val Lys	
65	70	75	80
Val Pro Ala His Asp Tyr Val Lys	Glu Ile Phe Glu Lys	Tyr Asp Gly	
85	90	95	
Asp Ile Pro Thr Gly Leu Cys Ile	Gln His Phe Asn Lys	Tyr Leu Lys	
100	105	110	
Val Ile Met Arg Glu Ile Gly Leu	Thr Asp Lys Val Ser	Tyr Ser Phe	
115	120	125	
Thr Gln Gly Gly Lys Leu His	Thr Val Thr Lys Glu Lys	Trp Glu Leu	
130	135	140	
Ile Ser Ser His Thr Ala Arg Arg	Ser Ala Ala Thr Asn Met	Tyr Leu	
145	150	155	160
Thr Gly Arg Met Lys	Thr Leu Glu Ile Met Lys	Leu Thr Arg His Arg	
165	170	175	
Ser Glu His Asn Phe Phe Arg Tyr	Ile Arg Leu Thr Gly Asp Asp	Thr	
180	185	190	
Ala Arg Ser Ile Ser Gly Asp Met	Phe Phe Arg Lys		
195	200		

<210> 10367

<211> 71

<212> PRT

<213> B.fragilis

<400> 10367

Arg Ile Leu Lys Ile Ile Thr Met Lys	Phe Ile Glu Val Ser	Thr	
1	5	10	15
Glu Asn Gly Lys Phe Leu Val Asn Val	Asn Thr Ile Ser Cys	Leu Tyr	
20	25	30	
Thr Ile Lys Asp Gly Arg Thr Arg	Ile Thr Leu Thr Ala Pro	Ser Ser	
35	40	45	
Lys Gly Asp Ile Phe Ile Asn Ala Gln	Glu Ser Tyr Glu Glu Val	Lys	
50	55	60	
Ala Leu Ile Lys Ala Ala Leu			
65	70		

<210> 10368

<211> 79

<212> PRT

<213> B.fragilis

<400> 10368

Asp Met Asn Ile Asp Thr Glu Phe	Asn Val Gly Asp Ser	Val Cys Tyr	
1	5	10	15
Leu Ser Gly Asp Asn Ile Cys His	Ser Thr Ile Ser Lys	Ile Thr Ile	
20	25	30	
Glu Ile Ser Tyr Thr Asp Arg Ser	Phe Ser Met Val Tyr	Lys Leu Ser	
35	40	45	
Asp Gly Leu Ser Val Pro Arg Asn	Asn Tyr Pro Gln Trp Asp	Lys Lys	
50	55	60	
Leu Phe Arg Asp Lys Asp Asp	Leu Ile Arg Tyr Leu Ser	Glu Ser	
65	70	75	

<210> 10369

<211> 150

<212> PRT

<213> B.fragilis

<400> 10369

Leu Lys Arg Ile Leu Glu Lys Ser Met Lys Ser Thr Glu Ile Leu Lys
 1 5 10 15
 Arg Ile Gln Ile Gln His Leu Leu Thr Ser Ser Ala Val Asp Ser Leu
 20 25 30
 Ala Arg Thr Ser Ala Leu Leu Glu Lys Val Ser Glu Leu Ser Val Lys
 35 40 45
 Glu Ala Ala Tyr Gly Leu Lys Cys Ile Glu Leu Tyr Gly Lys Leu Asp
 50 55 60
 Leu Asn Thr Ser Ser Leu Lys Thr Ala Gln Cys Ser Leu Phe Gly Asp
 65 70 75 80
 Leu Asn Glu Ser Tyr Ala Thr Phe Pro Lys Ser Gly Met Met Gln Asn
 85 90 95
 Gly Asn Val Tyr Gln Ala Pro Thr Leu Val Tyr Asn Arg Val Gly Asn
 100 105 110
 Gly Tyr Ile Val Leu Pro Thr Pro Val Lys Ser Thr Ala Asn Gly Ala
 115 120 125
 Cys Lys Asn Arg Tyr Phe Gly Ser Pro Thr Ser Ser Pro Arg Gly Trp
 130 135 140
 Lys Asp Ser Ala Cys Val
 145 150

<210> 10370

<211> 72
 <212> PRT
 <213> B.fragilis

<400> 10370

Tyr Arg Gln Ile His Lys Arg Arg Tyr Val Phe Gln Lys Ile Asn Leu
 1 5 10 15
 Leu Asn Phe Lys Ile Thr Ile Met Ile Lys Lys Ile Ile Arg Tyr Leu
 20 25 30
 Arg Lys Arg Lys Asp Met Lys Leu Arg Lys Trp Cys Ile Thr Leu Ala
 35 40 45
 Ala Asn Glu Leu Ser Arg Gly Glu Ala Ile Asp Ala Ala Asn Glu Ile
 50 55 60
 Tyr Lys Trp Val Lys Glu Gln Pro
 65 70

<210> 10371

<211> 205
 <212> PRT
 <213> B.fragilis

<400> 10371

Ser Tyr Lys Ile Phe Ile Arg Ile Ile Thr Asn Leu Glu Met Lys Gln
 1 5 10 15
 Ser Glu Leu Thr His Gly Ser Leu Phe Ser Gly Ile Glu Gly Phe Gly
 20 25 30
 Leu Gly Ala Ala Phe Ser Gly Ile Arg Thr Leu Trp Ser Cys Glu Tyr
 35 40 45
 Glu Asp Tyr Gln Thr Ser Ile Ile Lys Lys Asn Phe Gly Glu Glu His
 50 55 60
 Glu Ile Asn Arg Asp Ile Lys Thr Tyr Ser Asn Pro Thr Phe Val Asp
 65 70 75 80
 Ile Ile Ser Gly Gly Phe Pro Cys Gln Asp Ile Ser Val Ala Gly Lys
 85 90 95
 Gly Val Gly Ile Val Gly Glu Arg Ser Gly Leu Trp Thr Glu Met Tyr
 100 105 110

Arg Val Ile Arg Glu Val Arg Pro Lys Tyr Ile Ile Glu Asn Ser
 115 120 125
 Pro Met Leu Leu Ile Arg Gly Phe Glu Arg Val Leu Cys Asn Leu Ser
 130 135 140
 Glu Ile Gly Tyr Asp Ala Glu Trp Gln Cys Leu Ser Gly Thr Asp Phe
 145 150 155 160
 Gly Ile Gln Gln Gly Arg Glu Arg Leu Tyr Cys Leu Ala Tyr Ser Cys
 165 170 175
 Glu Ile Asn Ser Lys Arg Ser Met Gln Glu Ser Ile Phe Arg Lys Pro
 180 185 190
 Tyr Val Phe Thr Thr Gly Leu Glu Gly Gln Arg Val Arg
 195 200 205

<210> 10372

<211> 276

<212> PRT

<213> B.fragilis

<400> 10372

Tyr Ile Ser Leu Trp Arg His Arg Pro Cys Arg Arg Ser Asn Phe Ser
 1 5 10 15
 Ile Pro Asp Arg Val Lys Tyr Asp Lys Asp Cys Phe Thr Ile Glu Gly
 20 25 30
 Lys Asp Ile Phe Ile Leu Ser Ala Ala Phe His Tyr Phe Arg Cys Pro
 35 40 45
 Gln Glu Leu Trp Arg Asp Arg Phe Arg Lys Ile Lys Glu Ala Gly Phe
 50 55 60
 Asn Thr Val Glu Thr Tyr Val Pro Trp Asn Trp His Glu Arg Asn Met
 65 70 75 80
 Pro Lys Ser Val Asp Asp Tyr Ser Gln Cys Asn Phe Asp Asp Leu Lys
 85 90 95
 Ala Trp Leu His Met Ala His Glu Glu Phe Gly Leu Tyr Thr Ile Val
 100 105 110
 Arg Pro Gly Pro Phe Ile Cys Ala Glu Trp Ala Gly Gly Ala Tyr Pro
 115 120 125
 Arg Trp Leu Ala Lys Phe Cys Pro Asp Ser Tyr Asp Thr Ser Phe Trp
 130 135 140
 Leu Arg Ser Asn His Pro Glu His Met Lys Trp Ser Glu His Trp Tyr
 145 150 155 160
 Asn Ala Val Cys Arg Val Phe Ser Glu Glu Gln Leu Thr Arg Lys Gln
 165 170 175
 Pro Gly Glu Lys Gly Ile Ile Met Val Gln Leu Glu Asn Glu Tyr Ile
 180 185 190
 Tyr Phe Asp Met Glu Ser Glu Lys Glu Glu Phe Leu Arg Val Leu
 195 200 205
 Ser Asp Ala Cys Ile Arg Asn Gly Ile Asp Val Pro Leu Phe Thr Cys
 210 215 220
 Val Thr Pro Glu Val Arg Gly Ser His His Pro Val Ile Ser Gln Leu
 225 230 235 240
 Phe Asp Met Asn Asn Gln Tyr Val Trp Trp Asn Met His Glu Ala Lys
 245 250 255
 Ser Arg Ile Glu Lys Leu Glu Asn Arg Val Phe Thr Ser Arg Trp Ser
 260 265 270
 Thr Thr Gly Val
 275

<210> 10373

<211> 217

<212> PRT

<213> B.fragilis

<400> 10373

Glu Lys Phe Val Leu Gly Cys Ile Lys Arg Ile Trp Gly Tyr Pro His
 1 5 10 15
 Ile Leu Glu Asn Gly Ile Leu Tyr Leu Leu Ile Arg Lys Thr Cys Arg
 20 25 30
 Ala Gly Lys Asn His Ile Ser Val Thr Ala Asp Gly Leu Arg Gly Gly
 35 40 45
 Thr Arg Gly Ile Val Thr Arg Arg Tyr Asp Gly Val Phe Val Pro Glu
 50 55 60
 Gly Tyr Leu Val Pro Tyr Ser Gly Asp Glu Glu Gly Val Val Val
 65 70 75 80
 Lys Ala Thr Ala Trp Glu Asn Val Ile Cys Thr Lys Thr Pro Leu Lys
 85 90 95
 Val Val Arg Val Glu Ala Thr Ser Glu Gln Lys Arg Tyr Glu Ala Ser
 100 105 110
 His Ile Thr Asp Gly Asp Asp Phe Ser Trp Trp Ile Ala Asp Asp Glu
 115 120 125
 Ser Gln Pro Gln Ile Val Leu Leu Glu Leu Arg Ser Val Asn Val
 130 135 140
 Phe Ala Ser Arg Ile Arg Phe Gln Lys Asp Ser Ser Thr Tyr Thr His
 145 150 155 160
 Lys Val Glu Ile Ser Ile Asp Gly Lys Asn Trp Glu Thr Leu Tyr Glu
 165 170 175
 Arg Glu Cys Thr Gly Trp Asp Phe Lys Pro Val Gln Ile Gly Lys Glu
 180 185 190
 Leu Lys Tyr Met Arg Leu Thr Ile Glu Lys Ser Ser Glu Gly Ala Ala
 195 200 205
 Gly Leu Ala Glu Val Thr Leu Tyr Gln
 210 215

<210> 10374

<211> 362

<212> PRT

<213> B.fragilis

<400> 10374

Asn Pro Lys Pro Met Lys Leu Lys His Ile Pro Leu Leu Leu Val
 1 5 10 15
 Leu Thr Cys Cys Pro Ala Cys Gln Asn Lys Lys Ala Ser Ala Thr Lys
 20 25 30
 Glu Ile Pro Ser Glu Ala Thr Tyr Thr Asn Pro Leu Leu Ala Val Gly
 35 40 45
 Ala Glu Pro Trp Ala Val Phe His Glu Gly Lys Tyr Tyr Thr Gln
 50 55 60
 Gly Ala Glu Asn Lys Ile Ile Leu Trp Glu Thr Asn Asp Ile Thr Asp
 65 70 75 80
 Leu Glu His Ala Ala Arg Lys Glu Val Trp Ile Pro Lys Glu Ile Ser
 85 90 95
 Asn Ser Tyr His Leu Trp Gly Pro Glu Ile His Arg Ile Asp Gly Lys
 100 105 110
 Trp Tyr Val Tyr Phe Ala Ala Asp Asp Gly Asn Met Asp Asn His His
 115 120 125
 Ile Tyr Val Ile Glu Asn Ser Ser Pro Asn Pro Leu Glu Gly Glu Phe
 130 135 140
 Val Met Lys Gly Arg Ile Lys Thr Asp Lys Asp Asp Asn Trp Ala Ile
 145 150 155 160
 His Ala Ser Thr Phe Glu His Gln Gly Gln Arg Tyr Leu Ile Trp Cys

165	170	175	
Gly Trp Pro Lys Arg Arg Ile Glu Thr Glu Thr Gln Cys Ile Tyr Ile			
180	185	190	
Ala Arg Met Glu Asn Pro Trp Thr Leu Ser Ser Asp Arg Val Met Ile			
195	200	205	
Ala Glu Pro Glu Tyr Glu Trp Glu Arg Gln Trp Ile Ser Pro Asp Gly			
210	215	220	
Ser Lys Thr Ala Tyr Pro Ile His Val Asn Glu Ser Pro Gln Phe Phe			
225	230	235	240
Glu Ser Lys Asn Lys Asp Lys Val Leu Ile Tyr Tyr Cys Ala Ser Gly			
245	250	255	
Ser Trp Thr Pro Tyr Tyr Cys Ile Gly Leu Leu Thr Ala Asp Ala Gly			
260	265	270	
Ser Asp Leu Thr Asn Ala Ala Ser Trp Lys Lys Gln Asp Thr Pro Val			
275	280	285	
Phe Glu Gln Gln Pro Glu Asp Ser Val Phe Gly Pro Gly Ser Pro Ser			
290	295	300	
Phe Val Pro Thr Pro Asp Glu Lys Glu Trp Tyr Met Leu Tyr His Ala			
305	310	315	320
Arg Lys Ile Pro Asn Asp Ala Pro Gly Ala Thr Asp Ser Arg Ser Pro			
325	330	335	
Arg Leu Gln Lys Ile Ser Trp Asp Ala Asn Gly Met Pro Val Leu Gly			
340	345	350	
Lys Pro Cys Lys Glu Gly Thr Gln Ile Lys			
355	360		

<210> 10375

<211> 205

<212> PRT

<213> B.fragilis

<400> 10375

Lys Asp Tyr Tyr Gly His Gly Thr Glu Ala Arg Lys Pro Gly Thr Ala			
1	5	10	15
Ile Ala Arg Thr Leu Phe Gly Glu Leu Asn Pro Ser Gly Lys Leu Pro			
20	25	30	
Val Thr Phe Glu Lys Arg Trp Glu Asp Asn Pro Thr Phe His Ser Tyr			
35	40	45	
Tyr Asp Pro Asp Gly Asp Lys His Val Glu Tyr Thr Glu Gly Ile Phe			
50	55	60	
Val Gly Tyr Arg Gly Tyr Asp Lys Leu Lys Arg Glu Val Gln Tyr Pro			
65	70	75	80
Phe Gly Tyr Gly Leu Ser Tyr Thr Arg Phe Lys Leu Ser Ala Pro Thr			
85	90	95	
Val Gly Thr Pro Lys Thr Asp Gly Ser Val Thr Val Thr Cys Lys Leu			
100	105	110	
Thr Asn Thr Gly Arg Thr Ala Gly Ala Glu Val Val Gln Leu Tyr Val			
115	120	125	
Ser Asn Lys Asp Thr Thr Val Glu His Pro Glu Lys Glu Leu Lys Gly			
130	135	140	
Phe Arg Lys Val Tyr Leu Glu Pro Gly Glu Thr Lys Ser Ile Glu Ile			
145	150	155	160
Thr Val Pro Ala Glu Ala Phe Ser His Tyr Asp Thr Gly Ser Arg Arg			
165	170	175	
Leu Val Ile Asp Arg Gly Ser His Asp Ile Leu Leu Gly Phe Ser Ser			
180	185	190	
Arg Asp Ile Lys Ala Lys Met Ser Val Gly Ile Ser Arg			
195	200	205	

<210> 10376
 <211> 292
 <212> PRT
 <213> B.fragilis

<400> 10376

Leu	Pro	Met	Asn	Ala	Leu	His	Pro	Trp	Arg	Ser	Thr	Glu	Glu	Ile	Leu
1							5			10					15
Lys	Lys	Gln	Glu	Gln	Val	Asn	Arg	Lys	Lys	Lys	Glu	Leu	Gln	Gln	Val
							20			25					30
Lys	Val	Ala	Lys	Glu	Asn	Leu	Leu	Arg	Glu	Arg	Glu	Gly	Glu	Lys	Ala
							35			40					45
Lys	Leu	Glu	Ala	Gln	Glu	Lys	Glu	Lys	Arg	Glu	Ile	Val	Ala	Gly	Leu
							50			55					60
Gln	Lys	Gln	Lys	Gly	Leu	Gln	Ser	Glu	Ile	Ser	Lys	Lys	Arg	Arg	
							65			70					80
Glu	Ala	Asn	Gln	Leu	Asn	Ala	Lys	Ile	Asp	Lys	Leu	Ile	Ala	Glu	Glu
							85			90					95
Ile	Glu	Arg	Ala	Arg	Lys	Arg	Ala	Glu	Glu	Glu	Ala	Arg	Arg	Glu	Ala
							100			105					110
Ala	Ala	Arg	Arg	Lys	Ala	Ala	Ala	Lys	Glu	Ser	Lys	Ser	Ser	Ser	Thr
							115			120					125
Gly	Gly	Gly	Thr	Val	Pro	Ala	Lys	Lys	Ala	Glu	Pro	Leu	Glu	Arg	
							130			135					140
Phe	Thr	Met	Ser	Lys	Ala	Asp	Arg	Glu	Leu	Ser	Gly	Asn	Phe	Val	Ser
							145			150					160
Asn	Arg	Gly	Lys	Leu	Pro	Met	Pro	Ile	Thr	Gly	Pro	Tyr	Ile	Ile	Thr
							165			170					175
Ser	His	Tyr	Gly	Gln	Tyr	Ala	Val	Glu	Gly	Leu	Arg	Asn	Val	Lys	Leu
							180			185					190
Asp	Asn	Lys	Gly	Ile	Asp	Ile	Gln	Gly	Lys	Pro	Gly	Ala	Gln	Ala	Arg
							195			200					205
Ala	Ile	Phe	Asp	Gly	Lys	Val	Ala	Ala	Val	Phe	Gln	Leu	Asn	Gly	Leu
							210			215					220
Phe	Asn	Val	Leu	Ile	Arg	His	Gly	Asp	Tyr	Ile	Ser	Val	Tyr	Cys	Asn
							225			230					240
Leu	Ser	Ser	Ala	Ser	Val	Lys	Ser	Gly	Asp	Thr	Val	Thr	Thr	Arg	Gln
							245			250					255
Ala	Ile	Gly	Pro	Ile	Phe	Ser	Asp	Gly	Ser	Asp	Asn	Gly	Arg	Thr	Val
							260			265					270
Leu	His	Phe	Gln	Leu	Arg	Arg	Glu	Arg	Asp	Lys	Leu	Asn	Pro	Glu	Pro
							275			280					285
Trp	Leu	Asn	Arg												
							290								

<210> 10377
 <211> 1050
 <212> PRT
 <213> B.fragilis

<400> 10377

Ile	Gln	His	Met	Arg	Ile	Ile	Thr	Leu	Leu	Ile	Thr	Leu	Phe	Ala	Phe
1							5			10					15
Gly	Ile	Thr	Pro	Leu	Gln	Ala	Phe	Ser	Tyr	Phe	Ser	Phe	Lys	Lys	Tyr
							20			25					30
Gln	Val	Glu	Asp	Gly	Leu	Ser	His	Asn	Thr	Val	Trp	Cys	Ala	Met	Gln
							35			40					45
Asp	Ser	Tyr	Gly	Phe	Ile	Trp	Leu	Gly	Thr	Ser	Asp	Gly	Leu	Asn	Cys
							50			55					60

Tyr Asn Gly Arg Gly Asn Lys Val Tyr Arg Asn Val Leu Asn Asp Lys
 65 70 75 80
 Phe Ser Leu Glu Asn Asn Phe Val Gln Ala Leu Phe Glu Glu Asn
 85 90 95
 His Asn Ile Trp Val Gly Thr Asn Trp Gly Leu Tyr Ile Tyr Asp Arg
 100 105 110
 Glu Tyr Asp Arg Phe Thr Tyr Phe Asp Lys Lys Thr Arg Tyr Gly Val
 115 120 125
 Phe Ile Ser Ser Glu Ile Lys Lys Ile Lys Ser Glu Ser Gly Leu
 130 135 140
 Ile Trp Ile Ala Thr Leu Gly Gln Gly Leu Phe Val Tyr Asn Pro Gln
 145 150 155 160
 Thr Asp Val Leu Thr Gln Asn Ser Leu Gln Thr Ser Phe Val Trp Asp
 165 170 175
 Val Cys Glu Asn Asn Ser Gly His Ile Tyr Ala Ser Ser Leu Gln Glu
 180 185 190
 Gly Leu Leu Cys Phe Asp Glu Asn Gly Lys Phe Leu Gln Ser Tyr Pro
 195 200 205
 Leu Leu Ser Ala Gly Asn Asn Pro Asp Asn Tyr Arg Ile Asn Cys Leu
 210 215 220
 Leu Asp Ile Arg Ser Asp Ile Trp Phe Gly Ala Gly Ser Asn Leu Leu
 225 230 235 240
 Tyr Cys Leu Asn Glu Arg Thr Gly Asn Leu Asp Cys Tyr Asn Ala Ser
 245 250 255
 His Leu Asn Phe Gly Ala Ile Arg Cys Leu Leu Asn Tyr Ser Glu Thr
 260 265 270
 Glu Leu Leu Val Gly Thr Asp Asn Gly Leu Tyr Leu Phe Asp Leu His
 275 280 285
 Asp Lys Asn Phe Ser Arg Ile Asp Asn Pro Ser Asp Pro Arg Ser Leu
 290 295 300
 Ser Asp Gln Ser Ile Asn Ala Met Met Arg Asp Ala Glu Gly Gly Ile
 305 310 315 320
 Trp Val Leu Thr Asn Leu Gly Gly Val Asn Tyr Leu Ala Lys Pro Thr
 325 330 335
 Lys Arg Phe Asp Tyr Tyr Pro Pro Val Tyr Arg Asp Gly Gly Val Ala
 340 345 350
 Ala Gly Lys Val Val Gly Pro Phe Cys Glu Asn Ala Ala Gly Asp Ile
 355 360 365
 Trp Val Gly Thr Arg Asp Gly Leu Cys Phe Phe Asp Val Ser Thr His
 370 375 380
 Gln Leu Thr Ala Tyr Pro Ile Gly Gly Val Asp Lys Lys Tyr Asp
 385 390 395 400
 Ile Arg Ser Leu Leu Leu Asp Gly Glu Arg Leu Trp Ile Gly Thr Tyr
 405 410 415
 Ala Glu Gly Leu Lys Val Leu Asp Leu Arg Thr Gly His Val Lys Ser
 420 425 430
 Tyr Asn His Leu Gln Asp Thr Pro Asn Thr Ile Cys Ser Asp Asp Val
 435 440 445
 Leu Ala Val Tyr Lys Asp Arg Ser Gly Asp Ile Phe Val Gly Thr Ser
 450 455 460
 Trp Gly Leu Cys Arg Tyr Asn Pro Arg Glu Asp Asn Phe Ser Thr Ile
 465 470 475 480
 Thr Thr Val Gly Ser Met Val Ser Val Val Asp Ile Leu Glu Asp Met
 485 490 495
 Tyr Asp Asn Leu Trp Ile Gly Thr Ser Asn Ser Gly Val Phe Arg Phe
 500 505 510
 Asn Thr Arg Asn Gly His Trp Lys His Phe Gln His Glu Arg Asn Asp
 515 520 525
 Ser Thr Thr Ile Thr Asn Asn Ser Val Ile Thr Leu Phe Glu Asp Leu

530	535	540													
Lys	Gly	Thr	Met	Trp	Val	Gly	Thr	Asn	Gly	Gly	Gly	Leu	Cys	Ser	Phe
545					550				555						560
Asp	Pro	Lys	Thr	Glu	Thr	Phe	Ile	Asp	Phe	Asp	Pro	Asp	Asn	Thr	Ile
							565		570					575	
Leu	Pro	Asn	Arg	Val	Ile	Tyr	Ser	Ile	Glu	Gln	Asp	Lys	Thr	Gly	Asp
				580				585						590	
Phe	Trp	Ile	Ser	Ser	Asn	Ala	Gly	Leu	Ile	Thr	Ile	Asn	Pro	Ile	Thr
					595			600			605				
Lys	Gln	His	Phe	Arg	Gln	Phe	Thr	Val	Asn	Asp	Gly	Leu	Gln	Gly	Asn
					610			615			620				
Gln	Phe	Thr	Ala	Gln	Ser	Ser	Leu	Lys	Thr	Ala	Ser	Gly	Lys	Leu	Tyr
					625		630			635				640	
Phe	Gly	Gly	Ile	Ser	Gly	Phe	Asn	Ser	Phe	Val	Pro	Asp	Gln	Phe	Met
					645			650						655	
Asp	Asn	Gln	Tyr	Ile	Pro	Ser	Val	Tyr	Ile	Thr	Glu	Ile	Arg	Leu	Pro
					660			665			670				
Tyr	Thr	Thr	Asp	Glu	Arg	Leu	Val	Gln	Asp	Ile	Leu	His	Leu	Glu	Gly
					675		680			685					
Pro	Leu	Tyr	Arg	Ala	Glu	Thr	Ile	Thr	Leu	Pro	Tyr	Glu	His	Asn	Thr
					690		695			700					
Phe	Ser	Val	Ser	Phe	Val	Ala	Leu	Ser	Tyr	Glu	Asp	Pro	Leu	Lys	Asn
					705		710			715				720	
Arg	Tyr	Ser	Tyr	Arg	Leu	Lys	Gly	Val	Asp	Lys	Glu	Trp	Val	Ile	Asn
					725			730			735				
Ser	Glu	Gln	Asn	Thr	Ala	Ser	Tyr	Thr	Asn	Leu	Pro	Pro	Gly	Lys	Tyr
					740			745			750				
Glu	Phe	Glu	Val	Arg	Gly	Ser	Asn	Asn	Asp	His	Lys	Trp	Asn	Asp	Gln
					755		760			765					
Thr	Thr	Ser	Leu	Leu	Ile	Val	Val	Thr	Pro	Pro	Trp	Trp	Leu	Thr	Thr
					770		775			780					
Trp	Ala	Tyr	Cys	Val	Tyr	Thr	Leu	Leu	Leu	Gly	Leu	Ala	Tyr	Tyr	
					785		790			795				800	
Ala	Gly	Trp	His	Trp	Asn	Arg	His	Val	Lys	Lys	Tyr	Lys	Arg	Arg	
					805			810			815				
Met	Glu	Glu	Tyr	Gln	Thr	Thr	Lys	Glu	Lys	Glu	Val	Tyr	Lys	Ser	Lys
					820			825			830				
Ile	Ser	Phe	Phe	Ile	Asn	Leu	Val	His	Glu	Ile	Arg	Thr	Pro	Leu	Ser
					835			840			845				
Leu	Ile	Arg	Leu	Pro	Leu	Glu	Lys	Leu	Leu	Glu	Asp	Lys	Arg	Glu	Gly
					850		855			860					
Arg	Asp	Ala	Lys	Tyr	Leu	Ser	Val	Ile	Asp	Arg	Asn	Val	Asn	Tyr	Leu
					865		870			875				880	
Leu	Gly	Ile	Thr	Asn	Gln	Leu	Leu	Asp	Phe	Gln	Lys	Met	Glu	Asn	Gly
					885			890			895				
Gly	Val	Gln	Leu	Ser	Leu	Lys	Lys	Cys	Asp	Ile	Asn	Gln	Leu	Val	Ser
					900			905			910				
Asp	Val	His	Ser	Gln	Phe	Thr	Ser	Pro	Ala	Glu	Leu	Lys	Gly	Ile	Ser
					915			920			925				
Val	Met	Leu	Asp	Leu	Pro	Glu	Gly	Glu	Ile	Phe	Ala	Ser	Val	Asp	Arg
					930		935			940					
Glu	Lys	Val	Cys	Lys	Ile	Ile	Val	Asn	Leu	Ile	Gly	Asn	Ala	Val	Lys
					945		950			955				960	
Tyr	Ala	Gln	Ser	Arg	Ile	Asp	Ile	Lys	Leu	Val	Ser	Ser	Asp	Glu	Gly
					965			970			975				
Phe	Arg	Val	Ser	Val	Ser	Asp	Asp	Gly	Pro	Gly	Ile	Pro	Asp	Val	Glu
					980			985			990				
Lys	Arg	Lys	Val	Phe	Glu	Ala	Phe	Tyr	Gln	Val	Lys	Asp	Gly	Lys	Ser
					995			1000			1005				

Gly Ala Val Gly Thr Gly Ile Gly Leu Ala Phe Ser Lys Ser Leu Ala
 1010 1015 1020
 Glu Ala His His Gly Thr Leu Ser Leu Glu Asp Ser Val Tyr Gly Gly
 1025 1030 1035 1040
 Ser Leu Phe Cys Ser His Phe Ala Leu Gly
 1045 1050

<210> 10378

<211> 301

<212> PRT

<213> B.fragilis

<400> 10378

Ala Leu Lys Ile Val Tyr Met Val Asp Arg Ser Phe Val Leu Thr Leu
 1 5 10 15
 Pro Trp Gly Glu Glu Ala Val Ser Glu Glu Pro Glu Val Val Ile Pro
 20 25 30
 Asp Gly Arg Glu Ala Ala Asp Glu Glu Gln Gly Thr Glu Leu Ser Gly
 35 40 45
 Ser Lys Phe Thr Ile Leu Leu Val Glu Asp Asn Val Asp Leu Leu Asn
 50 55 60
 Leu Thr Arg Glu Ser Leu Ser Thr Trp Phe Lys Val Leu Lys Ala Gln
 65 70 75 80
 Asn Gly Arg Gln Ala Leu Glu Val Leu Ala Asn Glu Thr Val Asp Val
 85 90 95
 Ile Val Ser Asp Val Met Met Pro Glu Met Asn Gly Leu Glu Leu Thr
 100 105 110
 Ala Lys Val Lys Ser Asp Ile Glu Tyr Ser His Ile Pro Val Ile Leu
 115 120 125
 Leu Thr Ala Lys Thr Thr Leu Glu Ala Lys Val Glu Gly Phe Glu Cys
 130 135 140
 Gly Ala Asp Val Tyr Ile Glu Lys Pro Phe Ser Ile Arg Gln Leu Arg
 145 150 155 160
 Lys Gln Ile Glu Asn Leu Leu Lys Leu Arg Gln Ala Phe His Lys Met
 165 170 175
 Met Ser Glu Leu Ser Gly Gly Asn Gly Ala Ala Pro Ile Ser Pro Val
 180 185 190
 Glu Tyr Ser Val Ser Gln Lys Asp Cys Glu Leu Met Ala Lys Val Arg
 195 200 205
 Ala Ala Val Glu Ala Gln Leu Ser Asp Glu Asn Phe Ser Val Asp Thr
 210 215 220
 Leu Ala Glu Ser Leu Asn Met Ser Arg Ser Asn Phe Tyr Arg Lys Ile
 225 230 235 240
 Lys Ala Leu Ala Gly Met Pro Pro Asn Asp Tyr Leu Lys Thr Ile Arg
 245 250 255
 Leu Asn Lys Ala Ala Glu Leu Leu Lys Ser Gly Val Arg Ile Thr Glu
 260 265 270
 Val Cys Glu Lys Ile Gly Phe Ser Ser Ser Ser Tyr Phe Ala Lys Cys
 275 280 285
 Phe Lys Ile Gln Phe Gly Val Leu Pro Lys Asp Tyr His
 290 295 300

<210> 10379

<211> 649

<212> PRT

<213> B.fragilis

<400> 10379

Arg Asn Pro Val Lys Thr Leu Thr Leu Gln Cys Leu Phe Ser Thr Ala

1	5	10	15												
Gln	Lys	Arg	Phe	Thr	Ala	Asp	Val	Glu	Gln	Gln	Ala	Glu	Lys	Ile	Leu
			20				25					30			
Ser	Gln	Met	Thr	Leu	Asp	Glu	Lys	Leu	Ser	Tyr	Ile	Gly	Ile	Asn	
			35				40				45				
Trp	Met	Tyr	Thr	Arg	Pro	Leu	Glu	Arg	Phe	Gly	Ile	Pro	Arg	Leu	Lys
			50			55			60						
Met	Ser	Asp	Gly	Pro	Gln	Gly	Leu	Gly	Thr	His	Gly	Pro	Ser	Thr	Ala
			65			70			75			80			
Tyr	Pro	Cys	Ala	Leu	Met	Leu	Ala	Ala	Thr	Trp	Asn	Glu	Gln	Leu	Ala
			85				90				95				
Thr	Glu	Tyr	Gly	Ser	Ala	Leu	Gly	Lys	Asp	Cys	Arg	Ala	Arg	Gly	Val
			100			105			110						
His	Val	Val	Leu	Gly	Pro	Ala	Val	Asn	Ile	Tyr	Arg	Ala	Pro	Met	Cys
			115			120			125						
Gly	Arg	Asn	Phe	Glu	Tyr	Met	Gly	Glu	Asp	Pro	Tyr	Leu	Thr	Ser	Arg
			130			135			140						
Met	Ala	Thr	Gly	Tyr	Ile	Lys	Gly	Val	Gln	Gly	Gln	Gly	Val	Met	Ala
			145			150			155			160			
Thr	Ile	Lys	His	Phe	Ile	Ala	Asn	Asn	Ser	Asp	Tyr	Asp	Arg	Asp	His
			165				170			175					
Ile	Ser	Ser	Asp	Ile	Asp	Glu	Arg	Thr	Leu	Asn	Glu	Ile	Tyr	Phe	Pro
			180			185			190						
Ser	Phe	Arg	Ala	Ala	Val	Gln	Glu	Ala	Glu	Val	Gly	Ala	Val	Met	Ser
			195			200			205						
Ser	Tyr	Asn	Leu	Leu	Asn	Gly	Ile	Tyr	Thr	Thr	Glu	His	Pro	Trp	Leu
			210			215			220						
Leu	Lys	Asp	Val	Leu	Arg	Gln	Gln	Trp	Gly	Phe	Lys	Gly	Ile	Leu	Met
			225			230			235			240			
Ser	Asp	Trp	Gly	Ser	Thr	His	His	Cys	Ile	Pro	Ala	Val	Lys	Gly	Gly
			245				250			255					
Leu	Asp	Leu	Glu	Met	Pro	Ala	Gly	Ser	Lys	Met	Gln	Pro	Glu	Glu	Leu
			260			265			270						
Lys	Tyr	Tyr	Leu	Arg	Thr	Gly	Asp	Ile	Thr	Ile	Glu	Met	Ile	Asp	Glu
			275			280			285						
Lys	Val	Arg	His	Ile	Leu	Gln	Thr	Leu	Leu	Ala	Phe	Gly	Phe	Arg	Glu
			290			295			300						
Thr	Gln	Gln	Pro	Asp	Thr	His	Ile	Pro	Leu	Asn	Pro	Gln	Cys	Ala	
			305			310			315			320			
Gln	Thr	Ala	Leu	Asn	Val	Ala	Ser	Glu	Gly	Leu	Val	Leu	Leu	Asn	
			325				330			335					
Thr	Asn	Gln	Ile	Leu	Pro	Ile	Arg	Ser	Gly	Lys	Val	Lys	Thr	Ile	Ala
			340				345			350					
Val	Val	Gly	Lys	Asn	Ala	Gln	Gly	Tyr	Val	Cys	Gly	Gly	Ser	Gly	
			355			360			365						
Glu	Val	His	Pro	Phe	Gln	Tyr	Val	Ser	Val	Leu	Asp	Gly	Ile	Arg	Lys
			370			375			380						
Glu	Ala	Ala	Glu	Arg	Gly	Ile	Arg	Val	Glu	Tyr	Leu	Asp	Val	Tyr	Asn
			385			390			395			400			
Tyr	Leu	Pro	Thr	Ile	Ile	Phe	Thr	Asp	Thr	Glu	Arg	Lys	Gln	Lys	Gly
			405				410			415					
Phe	Arg	Ala	Gln	Tyr	Phe	Asp	Asn	Met	Asn	Leu	Glu	Gly	Thr	Pro	Lys
			420			425			430						
Val	Glu	Gln	Thr	Glu	Thr	Lys	Ile	Asn	Tyr	Ser	Trp	Ser	Gly	Gly	Thr
			435			440			445						
Gly	Leu	Lys	Glu	Met	Pro	Lys	Glu	Gln	Phe	Ser	Val	Arg	Trp	Asn	Gly
			450			455			460						
Thr	Ile	Cys	Pro	Gln	Glu	Thr	Asp	Glu	Tyr	Leu	Phe	Thr	Leu	Gly	Gly
			465			470			475			480			

Asp Asp Gly Tyr Arg Leu Tyr Ile Asp Gly Lys Leu Ile Ala Asp Glu
 485 490 495
 Trp His Glu Gly Ala Phe Arg Asn Ser Thr Tyr Arg Cys Met Leu Glu
 500 505 510
 Ala Gly Lys Lys Tyr Asp Leu Lys Ile Glu Tyr Phe Gln Lys Gly Gly
 515 520 525
 Gly Ala Ala Val Asn Phe Ile Trp Lys Gln Lys Asn Ala Ser Asn Asn
 530 535 540
 Leu Phe Val Glu Ala Leu Asn Arg Asn Asp Leu Val Val Ala Cys Ile
 545 550 555 560
 Gly Phe Asn Ser Asp Thr Glu Gly Glu Gly Arg Asp Arg Thr Phe Glu
 565 570 575
 Leu Pro Glu Asp Glu Ala Gln Leu Leu Gln Asn Thr Leu Gln Ser Lys
 580 585 590
 Arg Pro Val Val Gly Ile Val Asn Ala Gly Gly Asn Val Glu Met Gln
 595 600 605
 Ser Trp Glu Pro Ser Leu Lys Gly Leu Leu Trp Ala Trp Tyr Gly Gly
 610 615 620
 Gln Glu Ala Arg Asn Gly Asn Arg Thr Tyr Thr Leu Arg Gly Ala Gln
 625 630 635 640
 Ser Phe Gly Glu Ile Thr Cys His Phe
 645

<210> 10380
 <211> 216
 <212> PRT
 <213> B.fragilis

<400> 10380
 Phe Cys Pro Ser Glu Leu Asp Ile Arg Lys Ile Tyr Tyr Leu Cys Pro
 1 5 10 15
 Leu Lys Met Arg Val Arg Phe Pro Val Leu Asn Pro Phe Val Met Lys
 20 25 30
 Val Lys Arg Phe Val Leu Cys Leu Phe Met Leu Thr Leu Ile Gly Gly
 35 40 45
 Ile Cys Phe Ile Ser Cys Gly Asn Thr Ser Lys Ala Lys Ala Glu Ser
 50 55 60
 Asp Val Ala Ala Glu Thr Ala Glu Glu Thr Phe Gln Ser Phe Leu Lys
 65 70 75 80
 Lys Phe Thr Ser Ser Ala Ser Phe Gln Tyr Thr Arg Val Lys Phe Pro
 85 90 95
 Leu Lys Thr Pro Ile Thr Leu Met Thr Asp Asp Gly Asn Ser Glu Lys
 100 105 110
 Thr Phe Pro Phe Thr Gln Glu Lys Trp Pro Leu Leu Asp Ala Glu Thr
 115 120 125
 Leu Lys Glu Glu Arg Ile Thr Gln Glu Glu Gly Ile Tyr Val Ser
 130 135 140
 Lys Phe Thr Val Asn Glu Pro Thr His Lys Glu Phe Glu Ala Gly Tyr
 145 150 155 160
 Glu Glu Ser Glu Val Asp Leu Arg Val Ile Phe Asp Leu Ile Asp Gly
 165 170 175
 Lys Trp Tyr Val Thr Asp Cys Tyr Thr Gly Trp Tyr Gly Tyr Asp Leu
 180 185 190
 Pro Ile Asp Asp Leu Asn Glu Thr Val Lys Gln Val Lys Glu Glu Asn
 195 200 205
 Asp Thr Phe Lys Glu Leu His Pro
 210 215

<210> 10381

<211> 183

<212> PRT

<213> B.fragilis

<400> 10381

Ala Ile Thr Ser Ile Thr Leu Met Glu Lys Ile Gly Ile Phe Cys Ser
 1 5 10 15
 Ala Ser Gly Ser Ile Asp Pro Ile Tyr Phe Asp Ala Ala His Gln Ile
 20 25 30
 Gly Glu Trp Met Gly Lys Asn Gly Lys Thr Leu Ile Tyr Gly Gly Ala
 35 40 45
 Asn Leu Gly Leu Met Glu Cys Val Ala Lys Ala Val Lys Glu Asn Gly
 50 55 60
 Gly His Val Ile Gly Val Val Pro Ser Lys Leu Glu Glu Asn Gly Lys
 65 70 75 80
 Val Ser Thr Tyr Pro Asp Glu Ile Ile Ala Thr His Asp Leu Ser Asp
 85 90 95
 Arg Lys Asp Ile Ile Leu Gln Gln Ser Asp Val Leu Val Ala Leu Pro
 100 105 110
 Gly Gly Ile Gly Thr Leu Asp Glu Val Phe His Val Met Ala Ala Ala
 115 120 125
 Ser Ile Gly Tyr His Gln Lys Lys Val Ile Phe Tyr Asn Ala Asp Gly
 130 135 140
 Phe Tyr Asn Pro Leu Leu Ala Val Leu Ser Glu Leu Gln Thr Arg Gly
 145 150 155 160
 Phe Thr Arg His Pro Leu Ser Ser Tyr Tyr Glu Val Ala Asn Thr Phe
 165 170 175
 Asn Glu Leu Thr Ile Lys Ile
 180

<210> 10382

<211> 194

<212> PRT

<213> B.fragilis

<400> 10382

Arg Leu Leu Ser Ser Gly Leu Phe Ser Leu Ser Leu Leu Glu Asn Ile
 1 5 10 15
 Glu Phe Met Met Thr Leu Ile Arg Ile Thr Ser Ala Asp Asp Ser Arg
 20 25 30
 Leu Asn Arg Leu Ile Pro Leu Tyr Glu Glu Ser Phe Pro Glu Ser Glu
 35 40 45
 Arg Arg Lys Ile Gly Gln Leu Lys Arg Met Ile Glu Asn His Ala Pro
 50 55 60
 Met Tyr Phe Asn Ala Ile Glu Cys Asp Gly Glu Leu Ser Gly Met Phe
 65 70 75 80
 Val Tyr Trp Asp Met Gly Asp Phe Tyr Tyr Leu Glu His Leu Ala Val
 85 90 95
 Phe Pro Glu Met Arg Asn Lys Lys Ile Gly Gln Gln Val Leu Asp Tyr
 100 105 110
 Val Ala Glu His Leu Lys Gly Val Arg Leu Leu Glu Val Glu Pro Thr
 115 120 125
 Glu Asp Glu Met Thr Thr Arg Arg Val Asn Tyr Tyr Arg Arg Asn Gly
 130 135 140
 Tyr Glu Val Leu Asp Lys Thr Tyr Val Gln Pro Ser Tyr His Ala Leu
 145 150 155 160
 Glu Asp Ala Cys Pro Leu Trp Ile Met Gly Ser Glu Asp Ser Pro Arg
 165 170 175
 Leu Ala Glu Gln Val Glu Arg Ile Lys Glu Glu Val Tyr Arg Gln Gln

180

185

190

Val Gly

<210> 10383

<211> 235

<212> PRT

<213> *B. fragilis*

<400> 10383

Phe	Val	Ser	Pro	Asp	Asn	Lys	Leu	Tyr	Asn	Asn	Asn	Gln	Val	Ile	Thr
1							5		10						15
Asn	His	Gln	Leu	Pro	Met	Lys	Val	Ala	Tyr	Leu	Ser	Ser	Ala	Tyr	Leu
							20		25					30	
Ala	Pro	Val	Glu	Tyr	Tyr	Ser	Lys	Leu	Leu	Asn	Tyr	Asp	Lys	Ile	Phe
							35		40				45		
Ile	Glu	Gln	His	Asp	His	Tyr	Met	Lys	Gln	Thr	Tyr	Arg	Asn	Arg	Cys
							50		55				60		
Thr	Ile	Ala	Gly	Pro	Glu	Gly	Glu	Leu	Ala	Leu	Ser	Ile	Pro	Thr	Val
							65		70				75		80
Lys	Pro	Glu	Glu	Pro	Lys	Cys	Pro	Met	Lys	Asp	Ile	Arg	Ile	Ser	Asp
							85		90				95		
His	Gly	Asn	Trp	Arg	His	Leu	His	Trp	Asn	Ala	Ile	Glu	Ser	Ala	Tyr
							100		105				110		
Asn	Ser	Thr	Pro	Phe	Phe	Glu	Tyr	Tyr	Lys	Asp	Asp	Phe	Arg	Pro	Phe
							115		120				125		
Tyr	Glu	Lys	Lys	Tyr	Glu	Phe	Leu	Thr	Asp	Phe	Asn	Glu	Glu	Leu	Cys
							130		135				140		
Arg	Leu	Val	Cys	Glu	Leu	Ile	Asp	Ile	Gln	Pro	Ala	Ile	Glu	Arg	Thr
							145		150				155		160
Lys	Glu	Tyr	Lys	Thr	Asp	Phe	Ala	Pro	Asn	Glu	Ile	Asp	Phe	Arg	Glu
							165		170				175		
Ala	Ile	His	Pro	Lys	Lys	Asp	Phe	His	Arg	Thr	Asp	Pro	Glu	Phe	Ile
							180		185				190		
Pro	Gln	Pro	Tyr	Tyr	Gln	Val	Phe	Glu	Ala	Arg	His	Gly	Phe	Leu	Pro
							195		200				205		
Asn	Leu	Ser	Ile	Ile	Asp	Leu	Leu	Phe	Asn	Met	Gly	Pro	Glu	Ser	Leu
							210		215				220		
Leu	Ile	Leu	Gln	Lys	Thr	Cys	Ala	Asp	Ser	Gln					
							225		230				235		

<210> 10384

<211> 413

<212> PRT

<213> *B. fragilis*

<400> 10384

Leu	Ile	Lys	Pro	Thr	Ser	Asn	Lys	Asn	Arg	Leu	Met	Asn	Gln	Pro	Asp
1				5					10						15
Ile	Met	Thr	Leu	Pro	Lys	Asp	Lys	Leu	Phe	Leu	Ser	Glu	Gln	Thr	Trp
									20		25				30
Arg	Trp	Tyr	Gly	Pro	Asp	Asp	Pro	Val	Ser	Leu	Trp	Asp	Ile	Lys	Gln
									35		40				45
Ala	Gly	Ala	Thr	Gly	Ile	Val	Asn	Ala	Leu	His	His	Ile	Pro	Asn	Gly
									50		55				60
Glu	Val	Trp	Thr	Val	Glu	Glu	Ile	Met	Lys	Arg	Lys	Glu	Leu	Ile	Glu
									65		70				80
Ser	Val	Gly	Leu	Lys	Trp	Ser	Val	Val	Glu	Ser	Val	Pro	Val	His	Glu
									85		90				95

His Ile Lys Thr Gln Thr Gly Asn Phe Arg Lys Tyr Ile Glu Asn Tyr
 100 105 110
 Lys Glu Ser Leu Arg Asn Leu Gly Gln Cys Gly Ile His Ile Val Thr
 115 120 125
 Tyr Asn Phe Met Pro Val Leu Asp Trp Thr Arg Thr Asp Leu Ala Tyr
 130 135 140
 Thr Leu Pro Asp Gly Ser Lys Ala Leu Arg Phe Glu Arg Ala Ala Phe
 145 150 155 160
 Ile Ala Phe Asp Leu Phe Leu Leu Lys Arg Pro Gly Ala Glu Thr Glu
 165 170 175
 Tyr Thr Asp Glu Glu Lys Thr Lys Ala Arg Ile Arg Phe Glu Gln Thr
 180 185 190
 Asp Glu Lys Glu Lys Gln Leu Leu Val Arg Asn Met Ile Ala Gly Leu
 195 200 205
 Pro Gly Ser Glu Glu Ser Phe Thr Leu Glu Gln Phe Gln His Glu Leu
 210 215 220
 Asp Arg Tyr Arg Gly Ile Asp Ala Glu Lys Leu Arg Thr His Leu Ile
 225 230 235 240
 Tyr Phe Leu Lys Glu Ile Thr Ser Thr Ala Asp Glu Ala Gly Val Lys
 245 250 255
 Leu Val Ile His Pro Asp Asp Pro Pro Cys Ser Ile Leu Gly Leu Pro
 260 265 270
 Arg Ile Met Ser Cys Ala Glu Asp Phe Gln Ala Leu Ile Asp Ala Val
 275 280 285
 Pro Asn Glu Ser Asn Gly Leu Cys Leu Cys Thr Gly Ser Leu Gly Val
 290 295 300
 Ser Cys Thr Asn Asp Leu Glu Gly Met Met Arg Arg Phe Gly Asp Arg
 305 310 315 320
 Ile Asn Phe Val His Phe Arg Ser Thr Gln Arg Asp Ala Glu Gly Asn
 325 330 335
 Phe Tyr Glu Ala Asn His Leu Glu Gly Asp Val Asp Met Tyr His Val
 340 345 350
 Met Lys Ala Phe Leu Glu Leu Gln Gln Arg Arg Lys Val Ser Ile Pro
 355 360 365
 Met Arg Pro Asp His Gly His Gln Met Val Asp Asp Leu Lys Lys Lys
 370 375 380
 Thr Asn Pro Gly Tyr Ser Cys Ile Gly Arg Leu Arg Gly Leu Ala Glu
 385 390 395 400
 Leu Arg Gly Leu Glu Met Gly Ile Ala Lys Ser Ile Phe
 405 410

<210> 10385

<211> 93

<212> PRT

<213> B.fragilis

<400> 10385

Asn Thr Ala Thr Ala Leu Tyr Gln Cys Pro Leu Ser His Met Thr Ile
 1 5 10 15
 Leu Met Glu Gly Asn Ile Ala Thr Gln Asp Asp Thr Ile Ile Gln Gly
 20 25 30
 Thr Phe Ser Gly Asp Gly Ala Asp Thr Gly Tyr Thr Ile Ile Ser
 35 40 45
 Asp Leu Tyr Ile Val Thr Asn Val Asp Phe Ile His Gln Glu Ile Ala
 50 55 60
 Ile Ala Tyr Phe Gly Ser Ile Pro Thr Glu Ser Ser Pro Thr Asp Asn
 65 70 75 80
 Tyr Val Phe Ala Asp Met Val Val Ile Pro Asp Asn Gln
 85 90

<210> 10386

<211> 131

<212> PRT

<213> B.fragilis

<400> 10386

Ser Ile His Leu Pro Pro Ile Met Thr Ala Tyr Ile Lys Leu Leu Met
 1 5 10 15
 Leu Cys Leu Leu Phe Leu Val Phe Gly Thr Gln Lys Ser Ser Ala Leu
 20 25 30
 Gln Pro Val Asn Asn Gly Val Ala Val Thr Thr Ala Val Lys Ser His
 35 40 45
 Thr His Asn Val Pro Ser Phe Asp Asn Ser Gly His Asp Leu Phe Asp
 50 55 60
 Phe Asn Gln Gly Ile Leu Leu Lys Lys Ser Val Ser Asp Ser Ala Asn
 65 70 75 80
 Pro Tyr Lys Gln Ser Asn Asn Phe His Pro Ala Ile Lys Thr Asp Ala
 85 90 95
 Gln Arg Pro Ile Thr Phe Lys Glu Asp Thr Ser Thr Tyr Thr Leu Arg
 100 105 110
 Asn Arg Val Lys Pro Ala Gln Lys Tyr Asp Val Phe Ala Leu Arg His
 115 120 125
 Ile Leu Ile
 130

<210> 10387

<211> 254

<212> PRT

<213> B.fragilis

<400> 10387

Tyr Phe Gly Tyr Lys Val Tyr Lys Val Ser Lys Thr Met Lys Ile Ala
 1 5 10 15
 Leu Ile Gly Tyr Gly Lys Met Gly Lys Glu Ile Glu Lys Val Ala Leu
 20 25 30
 Ser Arg Gly His Glu Ile Val Ser Ile Ile Asp Ile Asn Asn Gln Asp
 35 40 45
 Asp Phe Glu Ser Glu Ala Phe Lys Ser Ala Asp Val Ala Ile Glu Phe
 50 55 60
 Thr Asn Pro Met Val Ala Tyr Ser Asn Tyr Met Lys Ala Phe Lys Ala
 65 70 75 80
 Gly Val Lys Leu Val Ser Gly Ser Thr Gly Trp Met Ala Glu His Gly
 85 90 95
 Asp Glu Val Lys Glu Leu Cys Asn Lys Gly Lys Thr Leu Phe Trp
 100 105 110
 Ser Ser Asn Phe Ser Leu Gly Val Thr Ile Phe Ser Ala Val Asn Lys
 115 120 125
 Tyr Leu Ala Lys Ile Met Asn Gln Phe Pro Ala Tyr Asp Val Thr Met
 130 135 140
 Ser Glu Thr His His Val His Lys Leu Asp Ala Pro Ser Gly Thr Ala
 145 150 155 160
 Ile Thr Leu Ala Glu Gly Ile Leu Glu Asn Met Glu Arg Lys Ser Val
 165 170 175
 Trp Val Lys Glu Glu Ala His Ala Thr Asn Glu Leu Pro Ile His Ser
 180 185 190
 Ile Arg Glu Gly Glu Val Phe Gly Ile His Thr Ile Arg Tyr Asp Ser
 195 200 205
 Glu Ala Asp Ser Ile Ser Ile Thr His Asp Ala Lys Asn Arg Gly Gly

210	215	220	
Phe Ala Leu Gly Ala Val	Leu Ala Ala Glu	Tyr Thr Ala Ala His Glu	
225	230	235	240
Gly Tyr Leu Gly Met Ser Asp	Leu Phe Pro	Phe Leu Lys Asp	
245	250		

<210> 10388

<211> 324

<212> PRT

<213> B.fragilis

<400> 10388

Arg Ile Leu Gln Thr Pro Ser Arg Trp	Leu Leu Gly Arg Lys Ile Lys
1 5	10 15
Lys Thr Met Arg Lys Val Ile Gly	Ile Gly Glu Thr Ile Leu Asp Ile
20 25	30
Ile Phe Arg Asn Asp Gln Pro Ser Ala Ala Val Pro	Gly Gly Ser Val
35 40	45
Phe Asn Gly Ile Val Ser Leu Gly Arg Met Gly	Val Asn Val Cys Phe
50 55	60
Ile Ser Glu Thr Gly Asn Asp His Val Gly Asn Ile	Ile Leu Gln Phe
65 70	75 80
Met Arg Asp Asn His Ile Pro Thr Asp His Val Asn Val	Phe Pro Asp
85 90	95
Gly Lys Ser Pro Val Ser Leu Ala Phe Leu Asn Glu	His Ser Asp Ala
100 105	110
Glu Tyr Ile Phe Tyr Lys Asp Tyr Pro Lys Gln Arg	Leu Asp Val Leu
115 120	125
Phe Pro Ser Ile Asn Glu Asp Asp Ile Val Ile	Gly Ser Tyr Tyr
130 135	140
Ala Leu Asn Pro Val Leu Arg Asp Lys Ile	Leu Glu Leu Leu Asp Ile
145 150	155 160
Ala Lys Glu Lys Arg Ala Ile Val Tyr Tyr Asp Pro	Asn Phe Arg Ser
165 170	175
Ser His Lys Asn Glu Ala Met Lys Leu Ala Pro Thr	Ile Ile Glu Asn
180 185	190
Leu Glu Tyr Ala Asp Ile Val Arg Gly Ser Leu	Glu Asp Phe Tyr Tyr
195 200	205
Met Tyr Gly Ile Lys Asp Val Glu Lys Ile	Tyr Lys Asp Lys Ile Lys
210 215	220
Phe Tyr Cys Pro Leu Phe Leu Cys Thr Ala	Gly Ala Glu Arg Ile Ser
225 230	235 240
Leu Arg Thr Asn Ala Ile Ser Lys Glu	Tyr Pro Val Ala Pro Leu Glu
245 250	255
Ala Val Ser Thr Ile Gly Ala Gly Asp Asn Phe	Asn Ala Gly Leu Ile
260 265	270
Tyr Gly Met Leu Lys Tyr Asp Val Arg Tyr Arg	Asp Leu Gln His Leu
275 280	285
Ser Glu Glu Thr Trp Asp Lys Val Ile Gln Cys	Gly Gln Asp Phe Ala
290 295	300
Ala Glu Val Cys Lys Ser Phe Asn Asn Ser Ile	Ser Gly Glu Phe Ala
305 310	315 320
Ala Asn Tyr Arg	

<210> 10389

<211> 61

<212> PRT

<213> B.fragilis

<400> 10389

Phe	Ile	Ser	Leu	Phe	Leu	Phe	Glu	Val	Gly	Leu	Ser	Gln	Cys	Val	
1						5				10				15	
Cys	Ser	Val	Ser	Ser	Leu	Phe	Arg	Tyr	Val	Trp	Asp	Gln	Lys	Leu	Asp
						20			25					30	
Phe	Leu	Tyr	Ile	Ala	Lys	Ala	Leu	Asn	Pro	Pro	Ser	Thr	Thr	Ala	Thr
						35			40				45		
Val	Pro	Val	Thr	Lys	Leu	Ala	Ala	Ser	Leu	Met	Arg	Tyr			
						50			55			60			

<210> 10390

<211> 411

<212> PRT

<213> B.fragilis

<400> 10390

Gln	Ile	Thr	Gln	Lys	Met	Lys	Lys	His	Leu	Ile	Leu	Ser	Ala	Cys	Leu
1						5				10				15	
Ile	Met	Ala	Ile	Ser	Ser	Phe	Ala	Gln	Lys	Lys	Asp	Phe	Ser	Tyr	Lys
						20			25				30		
Phe	Tyr	Gly	Gln	Ile	Arg	Thr	Asp	Leu	Tyr	Tyr	Asn	Ser	Arg	Ala	Asn
						35			40				45		
Glu	Glu	Thr	Val	Asp	Gly	Leu	Phe	Tyr	Met	Tyr	Pro	Lys	Asp	Glu	Val
						50			55			60			
Phe	Asp	Ser	Asn	Gly	Arg	Asp	Leu	Asn	Ala	Thr	Ala	Asn	Gly	Ser	Phe
						65			70			75			80
Tyr	Thr	Leu	Tyr	Thr	Arg	Leu	Gly	Leu	Asp	Val	Lys	Gly	Pro	Lys	Leu
						85			90			95			
Gly	Arg	Ala	Met	Thr	Ser	Ala	Lys	Val	Glu	Ala	Asp	Phe	Arg	Gly	Ser
						100			105			110			
Gly	Thr	Ser	Tyr	Ser	Thr	Ile	Arg	Leu	Arg	His	Ala	Tyr	Leu	Asn	Leu
						115			120			125			
Asp	Trp	Gly	Arg	Ser	Ala	Leu	Leu	Gly	Gln	Thr	Trp	His	Pro	Leu	
						130			135			140			
Phe	Gly	Asp	Val	Ser	Pro	Gln	Ile	Leu	Asn	Leu	Ser	Val	Gly	Ala	Pro
						145			150			155			160
Phe	Gln	Pro	Phe	Ser	Arg	Ala	Pro	Gln	Ile	Arg	Tyr	Arg	Tyr	Thr	His
						165			170			175			
Lys	Gly	Phe	Gln	Leu	Thr	Gly	Ala	Ala	Ile	Trp	Gln	Ser	Gln	Tyr	Leu
						180			185			190			
Ser	Gln	Gly	Ile	Val	Gly	Lys	Ser	Gln	Thr	Tyr	Ile	Lys	Asn	Ser	Cys
						195			200			205			
Val	Pro	Glu	Phe	Tyr	Leu	Gly	Leu	Asp	Tyr	Lys	Ala	Asn	Gly	Trp	Ile
						210			215			220			
Ala	Gly	Ala	Gly	Ile	Glu	Leu	Leu	Ser	Leu	Lys	Pro	Arg	Thr	Glu	Ser
						225			230			235			240
Lys	Val	Glu	Asp	Gln	Val	Tyr	Lys	Val	Asn	Glu	Arg	Ile	Thr	Thr	Leu
						245			250			255			
Ser	Tyr	Glu	Gly	His	Val	Lys	Tyr	Ser	Asn	Lys	Asp	Trp	Phe	Val	Gly
						260			265			270			
Ala	Lys	Thr	Val	Leu	Gly	Ser	Asn	Leu	Thr	Gln	Thr	Ser	Met	Leu	Gly
						275			280			285			
Gly	Phe	Gly	Ile	Lys	Ser	Ile	Asp	Asn	Arg	Thr	Gly	Glu	Gln	Lys	Tyr
						290			295			300			
Thr	Pro	Ile	Arg	Val	Ser	Ser	Ser	Trp	Leu	Asn	Val	Val	Tyr	Gly	Gln
						305			310			315			320
Lys	Trp	Lys	Pro	Gly	Ile	Phe	Leu	Gly	Tyr	Val	Lys	Asn	Met	Gly	Thr
						325			330			335			

Ser Asp Ala Leu Ala Ser Asn Gln Val Tyr Gly Thr Gly Thr Asn Val
 340 345 350
 Asp Gln Val Val Thr Ala Gly Ala Glu Leu Thr Tyr Asn Val Asn His
 355 360 365
 Trp Lys Phe Gly Val Glu Tyr Thr Tyr Thr Ser Ala Ala Tyr Gly Ser
 370 375 380
 Leu Tyr Leu Lys Asn Gly Lys Ile Ile Asp Thr His Tyr Val Gly Asn
 385 390 395 400
 Asn Arg Ile Val Gly Val Ala Met Phe Met Phe
 405 410

<210> 10391

<211> 528

<212> PRT

<213> B.fragilis

<400> 10391

Leu Lys Lys Gln Asn Met Lys Leu Asp Arg Phe Ile Asn Arg Pro Val
 1 5 10 15
 Leu Ser Thr Val Ile Ser Ile Val Ile Val Ile Leu Gly Val Leu Gly
 20 25 30
 Leu Leu Ser Leu Pro Ile Ser Gln Tyr Pro Asp Ile Ala Pro Pro Thr
 35 40 45
 Val Arg Val Asn Thr Thr Tyr Gln Gly Ala Asn Ala Gln Thr Val Leu
 50 55 60
 Asn Ser Val Ile Ala Pro Leu Glu Glu Gln Ile Asn Gly Val Glu Asn
 65 70 75 80
 Met Met Tyr Met Thr Ser Thr Ala Thr Asn Thr Gly Glu Ala Ser Ile
 85 90 95
 Glu Val Tyr Phe Lys Gln Gly Thr Asp Pro Asp Met Ala Ala Val Asn
 100 105 110
 Val Gln Asn Arg Val Ala Lys Ala Gln Gly Leu Leu Pro Ala Glu Val
 115 120 125
 Thr Lys Val Gly Val Ile Thr Ser Lys Arg Gln Thr Ser Met Leu Leu
 130 135 140
 Val Phe Ser Leu Tyr Ser Ser Asp Asp Lys Tyr Asp Asn Glu Phe Leu
 145 150 155 160
 Glu Asn Tyr Ala Lys Ile Asn Leu Val Pro Glu Val Gln Arg Val Pro
 165 170 175
 Gly Val Gly Asp Ala Met Val Leu Gly Ala Asp Tyr Ser Met Arg Ile
 180 185 190
 Trp Leu Lys Pro Asp Val Met Ala Gln Tyr His Leu Met Pro Thr Asp
 195 200 205
 Val Ser Ala Ala Leu Ala Glu Gln Asn Ile Glu Ala Ala Pro Gly Ser
 210 215 220
 Phe Gly Glu Gln Gly Lys Gln Thr Phe Gln Tyr Thr Leu Arg Tyr Lys
 225 230 235 240
 Gly Arg Leu Gln Ser Gln Glu Glu Phe Glu Asn Ile Val Ile Arg Ala
 245 250 255
 Asn Ser Asp Gly Gln Val Leu Arg Leu Lys Asp Ile Ala Thr Ile Glu
 260 265 270
 Leu Gly Arg Leu Thr Tyr Gly Phe Ser Asn Asn Val Asn Gly His Pro
 275 280 285
 Ala Val Thr Val Ile Val Phe Gln Thr Ala Gly Ser Asn Ala Thr Ala
 290 295 300
 Ile Ile Asn Asp Ile Leu Asp Leu Leu Glu Lys Ser Glu Ser Thr Phe
 305 310 315 320
 Pro Pro Gly Val Lys Val Asn Ile Ser Gln Asn Ala Asn Asp Phe Leu
 325 330 335

Phe Ala Ser Ile His Glu Val Val Lys Thr Leu Ile Glu Ala Phe Ile
 340 345 350
 Leu Val Phe Ile Val Val Tyr Ile Phe Leu Gln Asp Leu Arg Ser Thr
 355 360 365
 Leu Ile Pro Ala Ile Ala Ile Pro Val Ala Leu Ile Gly Thr Phe Phe
 370 375 380
 Val Leu Tyr Ile Ile Gly Phe Ser Ile Asn Leu Leu Thr Leu Cys Ala
 385 390 395 400
 Met Val Leu Ala Ile Ala Ile Val Val Asp Asp Ala Ile Val Val Val
 405 410 415
 Glu Gly Val His Ala Lys Leu Asp Gln Gly Tyr Lys Ser Ala Arg Leu
 420 425 430
 Ala Ser Ile Asp Ala Met Asn Glu Leu Gly Gly Ala Ile Val Ser Ile
 435 440 445
 Thr Leu Val Met Met Ser Val Phe Ile Pro Val Ser Phe Met Thr Gly
 450 455 460
 Thr Ser Gly Thr Phe Tyr Arg Gln Phe Gly Leu Thr Met Ala Ile Ala
 465 470 475 480
 Ile Ala Leu Ser Ala Val Asn Ala Leu Thr Leu Ser Pro Ala Leu Cys
 485 490 495
 Ala Ile Leu Leu Lys Pro His Asp Pro Asp Ala Lys Lys Ser Ile
 500 505 510
 Leu Ala Thr Val Ser Met Leu Arg Ser Met Leu Leu Met Thr Gln Tyr
 515 520 525

<210> 10392

<211> 284

<212> PRT

<213> B.fragilis

<400> 10392

Arg Ser His Lys Thr Arg Ser Leu Thr Phe Lys Ser Asn Ser Met Ala
 1 5 10 15
 Asn Leu Phe Ser Val Lys Asp Lys Val Val Val Ile Thr Gly Gly Thr
 20 25 30
 Gly Val Leu Gly Lys Ala Ile Ala Ala His Leu Ala Glu Glu Gly Ala
 35 40 45
 Lys Val Ile Leu Leu Gly Arg Lys Thr Glu Val Gly Asn Lys Ile Val
 50 55 60
 Glu Ser Ile Arg Thr Gln Gly Glu Ala Leu Phe Leu Thr Thr Asp
 65 70 75 80
 Val Leu Asp Arg Lys Ile Leu Glu Gln Asn Leu Ala Asp Ile Leu Lys
 85 90 95
 Ala Tyr Gly Arg Ile Asp Ala Leu Leu Asn Ala Ala Gly Gly Asn Met
 100 105 110
 Pro Gly Ala Thr Ile Ser Pro Thr Gly Asp Ile Phe Asp Leu Lys Ile
 115 120 125
 Asp Glu Phe Gln Lys Val Leu Asp Leu Asn Leu Thr Gly Thr Ile Leu
 130 135 140
 Pro Thr Gln Val Phe Leu Lys Pro Met Val Glu Gln Arg Ala Gly Ala
 145 150 155 160
 Ile Val Asn Phe Ser Ser Met Ala Ala Phe Arg Pro Leu Thr Arg Val
 165 170 175
 Ala Gly Tyr Ala Ala Ala Lys Ala Gly Ile Ser Asn Phe Thr Ala Phe
 180 185 190
 Met Ala Thr Glu Ile Ala Lys Lys Phe Gly Glu Gly Ile Arg Ile Asn
 195 200 205
 Ala Ile Ala Pro Gly Phe Phe Leu Thr Glu Gln Asn Arg Ala Leu Leu
 210 215 220

Thr Asn Pro Asp Gly Thr Tyr Thr Gln Arg Gly Gln Asp Val Ile Arg
 225 230 235 240
 Gln Thr Pro Phe Gly Arg Met Gly Arg Ala Glu Glu Leu Cys Gly Thr
 245 250 255
 Ile Gln Tyr Leu Ile Ser Asp Ala Ala Ser Phe Val Thr Gly Thr Val
 260 265 270
 Ala Val Val Asp Gly Gly Phe Asn Ala Phe Ala Met
 275 280

<210> 10393

<211> 394

<212> PRT

<213> B.fragilis

<400> 10393

Thr Ser Leu Lys Ile Glu Tyr Lys Glu Gly Met Lys Ser Lys Ile Val
 1 5 10 15
 Leu Phe Ala Phe Cys Leu Ala Leu Leu Ser Gly Cys Gly Lys Lys Gly
 20 25 30
 Phe Asn Met Gly Gly Thr Pro Glu Cys Ala Val Glu Thr Leu Gln Pro
 35 40 45
 Thr Thr Val Asn Leu Lys Ser Ser Tyr Pro Ala Thr Ile Lys Gly Lys
 50 55 60
 Gln Asp Ile Glu Ile Arg Pro Gln Val Ser Gly Phe Ile Thr Lys Leu
 65 70 75 80
 Asn Ile Asp Glu Gly Ser Met Val Lys Lys Gly Gln Val Leu Phe Val
 85 90 95
 Ile Asp Pro Val Gln Tyr Glu Ser Ala Ala Arg Ala Ala Lys Ala Ala
 100 105 110
 Val Ala Thr Ala Lys Ala Asn Val Ser Thr Gln Glu Ile Thr Val Lys
 115 120 125
 Asn Lys Arg Glu Leu Asn Lys Lys Asn Ile Ile Ser Asp Tyr Asp Leu
 130 135 140
 Glu Met Ala Glu Asn Thr Leu Ala Ser Ala Lys Ala Gln Leu Ala Ser
 145 150 155 160
 Ala Glu Ala Gln Leu Ile Ser Ala Asn Gln Asn Leu Ala Tyr Thr Arg
 165 170 175
 Val Thr Ser Pro Ser Asp Gly Val Ala Gly Thr Ile Pro Tyr Arg Val
 180 185 190
 Gly Ser Leu Val Ser Ala Ser Ser Pro Ser Pro Leu Thr Val Ile Ser
 195 200 205
 Asp Ile Thr Gln Met Tyr Val Tyr Phe Ser Leu Thr Glu Lys Glu Leu
 210 215 220
 Leu Asn Leu Ile Arg Gln Asp Gly Ser Gln Thr Glu Phe Leu Asn Ser
 225 230 235 240
 Phe Pro Ala Val Gln Leu Thr Leu Ala Asp Gly Thr Leu Tyr Ala Asp
 245 250 255
 Ser Gly Lys Ile Glu Thr Val Ser Gly Val Ile Asp Gln Asn Thr Gly
 260 265 270
 Ala Val Ser Met Arg Ala Thr Phe Pro Asn His Gly His Leu Leu Arg
 275 280 285
 Thr Gly Gly Thr Gly Asn Ile Gln Ile Pro Tyr Ser Lys Glu Asn Val
 290 295 300
 Ile Val Ile Pro Gln Lys Ala Thr Tyr Glu Ile Gln Asp Lys Lys Phe
 305 310 315 320
 Val Tyr Leu Leu Gln Pro Asp Asn Thr Val Lys Asn Thr Glu Ile Glu
 325 330 335
 Ile Leu Asn Leu Asn Asp Gly Gln Asn Tyr Val Val Thr Ala Gly Leu
 340 345 350

Lys Ala Gly Asp Lys Ile Val Val Glu Asn Val Ser Thr Leu Lys Asp
 355 360 365
 Gly Ala Thr Ile Lys Pro Leu Thr Gln Gln Glu Ser Ala Glu Arg Phe
 370 375 380
 Lys Ala Ala Leu Glu Glu Arg Lys Asn Gln
 385 390

<210> 10394

<211> 312

<212> PRT

<213> *B.fragilis*

<400> 10394

Ser Met Gly Lys Gly Leu Lys Trp Ile Ile Ala Phe Ala Gly Ala Met
 1 5 10 15
 Val Ile Val Leu Leu Leu Arg Gly Phe Ala Phe Thr Ser Cys Leu Ile
 20 25 30
 Pro Ser Ala Gly Met Glu Asn Ser Leu Phe Gln Gly Glu Arg Ile Leu
 35 40 45
 Val Asn Lys Trp Ser Tyr Gly Leu Arg Val Pro Tyr Met Ser Leu Phe
 50 55 60
 Ser Tyr His Arg Trp Gly Glu Ser Pro Ile His Lys Asp Asp Ile Val
 65 70 75 80
 Val Phe Asn Asn Pro Ala Gly Ile Lys Glu Pro Ile Ile Asp Arg Arg
 85 90 95
 Glu Ile Tyr Ile Ser Arg Cys Ile Gly Val Pro Gly Asp Thr Leu Leu
 100 105 110
 Ile Asp Ser Leu Phe Asn Val Val Asp Arg Ser Thr Gln Leu Gly Pro
 115 120 125
 Asp Arg Lys Gln Leu Tyr Thr Tyr Pro Gln Thr Lys Glu Gln Gln Leu
 130 135 140
 Asp Ser Leu Leu Ser Ile Leu Ser Ile Gly Pro Asn Glu Leu Met Gly
 145 150 155 160
 Gln His Glu Gly Lys Asn Val Arg Ser Phe Ser Arg Tyr Glu Tyr Tyr
 165 170 175
 Leu Leu Asp Gln Ala Met Asn Gly Lys Ser Trp Ile Gln Pro Leu Gln
 180 185 190
 Gln Ser Leu Gln Glu Ala Lys Pro Leu Ile Val Pro Gly Lys Gly
 195 200 205
 Lys Ala Val Arg Val Tyr Pro Trp Asn Arg Thr Leu Leu Arg Asn Thr
 210 215 220
 Leu Val Leu His Glu Gly Lys Gln Ala Glu Ile Arg Asn Asp Thr Leu
 225 230 235 240
 Tyr Ile Glu Gly Arg Pro Ser Gln His Cys Tyr Phe Thr Lys Asp Tyr
 245 250 255
 Tyr Trp Met Ala Ser Asn Asn Ser Val Asn Leu Ser Asp Ser Arg Leu
 260 265 270
 Phe Gly Phe Val Pro Gln Asp His Val Ile Gly Lys Ala Ser Arg Ile
 275 280 285
 Trp Phe Ser Lys Thr Asp His Thr Gly Ile Phe Ser Gly Tyr Arg Trp
 290 295 300
 Glu Arg Phe Phe Gln Pro Val Lys
 305 310

<210> 10395

<211> 491

<212> PRT

<213> *B.fragilis*

<220>

<221> UNSURE

<222> (338)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10395

Asn	Leu	Leu	Asn	Gly	Lys	Thr	Ser	Ile	Ile	Arg	Met	Gln	Lys	Gln	Lys
1				5				10				15			
Leu	Asn	Asn	Thr	Leu	Asn	Arg	Asn	Lys	Glu	Lys	Asn	Met	Lys	Lys	Gln
				20				25				30			
Ile	Ile	Gly	Met	Leu	Cys	Ala	Thr	Ala	Leu	Leu	Ser	Ser	Cys	His	Ile
		35					40				45				
Tyr	Lys	Ser	Tyr	Asp	Arg	Pro	Lys	Asp	Ile	Glu	Ala	Ser	Gly	Leu	Tyr
	50				55				60						
Arg	Asp	Thr	Val	Ser	Val	Ala	Asp	Thr	Leu	Val	Ser	Asp	Thr	Val	Asn
65				70				75			80				
Phe	Gly	Asn	Leu	Pro	Trp	Arg	Glu	Val	Phe	Thr	Asp	Pro	Gln	Leu	Gln
				85				90			95				
Ala	Leu	Ile	Glu	Gln	Gly	Leu	Thr	His	Asn	Thr	Asp	Leu	Leu	Thr	Ala
		100				105			110						
Ala	Leu	Lys	Val	Lys	Glu	Ala	Gln	Ala	Ser	Leu	Met	Ser	Ala	Arg	Leu
		115				120			125						
Ala	Tyr	Ala	Pro	Ser	Leu	Gly	Leu	Ser	Pro	Gln	Gly	Thr	Ile	Ser	Ser
	130				135			140							
Phe	Asp	Lys	His	Ala	Ala	Thr	Lys	Thr	Tyr	Ser	Leu	Pro	Ala	Thr	Ala
145					150			155			160				
Ser	Trp	Glu	Ile	Asp	Leu	Phe	Gly	Lys	Leu	Leu	Asn	Ala	Lys	Arg	Gly
			165				170			175					
Ala	Gln	Val	Thr	Leu	Leu	Gln	Thr	Lys	Ala	Tyr	Arg	Gln	Ala	Val	Gln
		180				185			190						
Thr	Gln	Ile	Ile	Ser	Gly	Ile	Ala	Asn	Thr	Tyr	Tyr	Thr	Leu	Leu	Met
	195					200			205						
Leu	Asp	Arg	Gln	Leu	Asp	Ile	Thr	Glu	Gln	Thr	Ala	Asp	Ile	Met	Lys
	210				215			220							
Arg	Asn	Val	Glu	Thr	Met	Gln	Ala	Met	Lys	Asp	Ala	Ala	Met	Phe	Asn
225					230			235			240				
Thr	Thr	Ser	Ala	Gly	Val	Glu	Gln	Ser	Lys	Ala	Ala	Tyr	Ala	Gln	Val
			245			250			255						
Leu	Ala	Ser	Ile	Pro	Ala	Ile	Gln	Lys	Ser	Ile	Arg	Glu	Ala	Glu	Asn
			260			265			270						
Ala	Met	Ser	Met	Leu	Leu	Ala	Gln	Ala	Pro	Gln	Thr	Ile	Lys	Arg	Gly
			275			280			285						
Val	Leu	Glu	Glu	Gln	Gln	Leu	Pro	Glu	Asp	Phe	Ser	Val	Gly	Val	Pro
	290				295			300							
Leu	Gln	Leu	Leu	Ser	Asn	Arg	Pro	Asp	Val	Lys	Ala	Ala	Glu	Met	Ala
305					310			315			320				
Leu	Ala	Gly	Thr	Tyr	Tyr	Asn	Ala	Asn	Ser	Thr	Arg	Ala	Ala	Phe	Tyr
			325			330			335						
Pro	Xaa	Ile	Thr	Ile	Ser	Gly	Ser	Ala	Gly	Trp	Thr	Asn	Ser	Ala	Gly
			340			345			350						
Ser	Ala	Ile	Ile	Asn	Pro	Gly	Lys	Leu	Leu	Ala	Ser	Val	Leu	Gly	Ser
			355			360			365						
Leu	Thr	Gln	Pro	Leu	Phe	Tyr	Arg	Gly	Ala	Asn	Ile	Ala	Arg	Leu	Lys
	370				375			380			385				
Ile	Ala	Lys	Ala	Gln	Gln	Glu	Glu	Ala	Lys	Leu	Ala	Phe	Gln	Gln	Ser
385					390			395			400				
Leu	Leu	Asn	Ala	Gly	Ser	Glu	Val	Ser	Asn	Ala	Leu	Tyr	Gln	Tyr	Gln
			405				410			415					
Ser	Ala	Ser	Glu	Lys	Thr	Ala	Ser	Arg	Lys	Leu	Gln	Val	Glu	Ser	Ser

420	425	430
Glu Lys Ala Ser Glu Tyr Thr Lys	Glu Leu Phe Lys Leu Gly Thr Ser	
435	440	445
Thr Tyr Leu Glu Val Leu Ser Ala Glu Gln Ser	Leu Leu Ser Ala Arg	
450	455	460
Leu Ser Gln Val Asn Asp Thr Phe Asp Arg Met	Gln Ala Val Val Ser	
465	470	475
Leu Tyr Gln Ala Leu Gly Gly Arg Glu Asp		480
485	490	

<210> 10396

<211> 312

<212> PRT

<213> B.fragilis

<400> 10396

Lys Gln Met Asn Thr Leu Pro Ile His	Leu Ala Pro Leu Gln Gly Tyr		
1	5	10	15
Thr Glu Ala Ala Tyr Arg Asn Ala His	Ala Ala Val Phe Gly Gly Val		
20	25	30	
Asp Val Tyr His Thr Pro Phe Val Ile Asp Arg	Gly Glu Phe Arg		
35	40	45	
His Lys Asp Val Arg Asp Ile Leu Pro Glu Asn	Asn Arg Val Pro His		
50	55	60	
Leu Ile Pro Gln Leu Ile Ala Ser Glu Met	Asp Lys Thr Glu Arg Ile		
65	70	75	80
Ile Ala Leu Phe Ile Glu Gln Gly Tyr Arg	Glu Met Asp Ile Asn Leu		
85	90	95	
Gly Cys Pro Phe Pro Met Leu Ala Lys Arg	Gln Cys Gly Ser Gly Met		
100	105	110	
Leu Pro His Pro Asp Lys Val Glu Thr	Leu Leu Lys Gln Ile Glu Gln		
115	120	125	
Tyr Pro Asp Val Ser Phe Ser Val Lys Met	Arg Leu Gly Trp Glu Lys		
130	135	140	
Pro Asp Glu Cys Leu Thr Leu Leu Pro	Leu Leu Asn Ala Ala Pro Leu		
145	150	155	160
Thr Glu Ile Ile Val His Pro Arg Leu	Gly Ile Gln Gln Tyr Lys Gly		
165	170	175	
Glu Val Asn Met Glu Gly Phe Thr Ala	Phe Tyr Glu Ala Cys Arg His		
180	185	190	
Pro Val Ile Tyr Asn Gly Asp Ile Leu	Thr Ile Glu Asp Ile Arg Cys		
195	200	205	
Ile Thr Glu Lys Phe Pro Lys Leu	Thr Gly Val Met Ile Gly Arg Gly		
210	215	220	
Leu Leu Ala Asn Pro Ala Leu Gly	Trp Glu Tyr Lys Glu Gly Lys		
225	230	235	240
Leu Thr Pro Glu Glu Trp Arg Glu	Lys Leu Arg Ala Leu His Thr Ala		
245	250	255	
Val Phe Gln His Tyr Glu Thr Gln	Ile Gln Gly Glu Ala Gln Leu		
260	265	270	
Val Thr Lys Met Lys Thr Phe Trp	Glu Tyr Leu Ala Pro Gln Ile Asp		
275	280	285	
Arg Lys Ser Trp Lys Ala Ile His Lys	Ser Thr Thr Leu Ala Lys Tyr		
290	295	300	
Asn Ile Ala Val Arg Ser Ala Phe			
305	310		

<210> 10397

<211> 564

<212> PRT
<213> *B. fragilis*

<220>
<221> UNSURE
222 (472)

<222> (4/3)
<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10397

Lys Glu Ile Asp Phe Gly Asn Arg Phe His Ala Ser Phe Asn Ala Ala
 1 5 10 15
 Tyr Asp Pro Val Leu Lys Lys Tyr Lys Lys Arg Val Leu Phe Phe Ile
 20 25 30
 Gln Lys Pro Val Leu Thr Ile Gly Ser Val Val Val Gly Phe Ala Leu
 35 40 45
 Leu Ile Phe Leu Met Lys Val Thr Pro Thr Gly Leu Val Pro Asn Glu
 50 55 60
 Asp Thr Gly Thr Ile Met Ala Val Val Asp Met Pro Pro Gly Ser Ser
 65 70 75 80
 Leu Glu Arg Thr Gln Glu Val Met Trp Gln Val Asp Ser Leu Leu Ala
 85 90 95
 Ser Asp Pro Ala Ile Glu Ser Arg Thr Met Ile Ala Gly Tyr Ser Phe
 100 105 110
 Ile Ala Gly Gln Gly Pro Ser Tyr Gly Ser Phe Ile Cys Lys Met Lys
 115 120 125
 Asn Trp Asp Glu Arg Ser Ile Ala Gln Arg Ser Asp Phe Val Ser Gly
 130 135 140
 Met Leu Tyr Leu Lys Ala Arg Glu Val Ile Lys Asp Ala Arg Val Leu
 145 150 155 160
 Leu Phe Ala Pro Pro Met Ile Pro Gly Tyr Ser Val Ser Asn Gly Phe
 165 170 175
 Glu Met Asn Leu Gln Asp Lys Thr Gly Gly Ser Leu Asp Lys Phe Tyr
 180 185 190
 Glu Val Ala Gln Asp Phe Ile Thr Lys Leu Gln Ala Arg Pro Glu Ile
 195 200 205
 Gln Ser Ala Gln Thr Ser Phe Asn Pro Asn Phe Pro Gln Tyr Met Ile
 210 215 220
 Asp Ile Asp Ala Ala Cys Lys Lys Ala Gly Leu Ser Pro Ser Asp
 225 230 235 240
 Ile Leu Thr Thr Leu Gln Gly Tyr Tyr Gly Gly Leu Tyr Ser Ser Asn
 245 250 255
 Phe Asn Arg Phe Gly Lys Met Tyr Arg Val Met Ile Gln Ala Asp Pro
 260 265 270
 Asn Ser Arg Thr Asn Leu Glu Ser Leu Asn Ser Val Lys Val Arg Asn
 275 280 285
 Gly Asn Glu Met Ala Pro Ile Thr Gln Phe Met Ser Val Lys Arg Ile
 290 295 300
 Tyr Gly Pro Asp Asn Ile Lys Arg Phe Asn Met Phe Thr Ala Met Thr
 305 310 315 320
 Ile Asn Gly Ser Pro Ala Asp Gly Tyr Ser Ser Gly Gln Ala Ile Gln
 325 330 335
 Ala Met Gln Glu Val Ala Glu Gln Thr Leu Pro Thr Gly Tyr Gly Tyr
 340 345 350
 Glu Phe Ser Gly Met Thr Arg Glu Glu Gln Ser Ser Ser Gly Ser Thr
 355 360 365
 Thr Ala Met Ile Phe Val Leu Cys Phe Val Phe Val Tyr Leu Leu Leu
 370 375 380
 Ser Ala Gln Tyr Glu Ser Tyr Ile Leu Pro Phe Ala Val Leu Leu Ser
 385 390 395 400

Ile Pro Phe Gly Leu Ala Gly Ser Phe Ile Phe Ala His Leu Met Gly
 405 410 415
 Leu Ala Asn Asn Val Leu Pro Ile Leu Gly Ala Ala Thr Asn Asn Ile
 420 425 430
 Tyr Met Gln Ile Ala Leu Ile Met Leu Met Gly Leu Leu Ala Lys Asn
 435 440 445
 Ala Ile Leu Ile Val Glu Phe Ala Leu Asp Arg Arg Lys Met Gly Met
 450 455 460
 Ser Ile Thr Trp Ala Ala Val Leu Xaa Ala Gly Ala Arg Leu Arg Pro
 465 470 475 480
 Ile Leu Met Thr Ser Leu Ala Met Val Val Gly Leu Leu Pro Leu Met
 485 490 495
 Phe Ala Met Gly Val Gly Ala Asn Gly Asn Arg Ala Leu Gly Thr Ala
 500 505 510
 Ala Val Gly Gly Met Phe Ile Gly Met Ile Cys Gln Ile Phe Val Val
 515 520 525
 Pro Ala Leu Phe Val Ile Phe Gln Tyr Leu Gln Glu Lys Val Lys Pro
 530 535 540
 Ile Glu Trp Glu Asp Ile Asp Asn Thr Asp Ala Glu Thr Glu Ile Glu
 545 550 555 560
 Gln Tyr Ala Lys

<210> 10398

<211> 208

<212> PRT

<213> B.fragilis

<400> 10398

Arg Tyr Lys Asp Met Lys Lys Leu Ile Ile Phe Asp Leu Asp Gly Thr
 1 5 10 15
 Leu Leu Asn Thr Ile Ala Asp Leu Ala His Ser Thr Asn His Ala Leu
 20 25 30
 Gln Thr Leu Gly Tyr Pro Thr His Glu Val Ala Ser Tyr Asn Phe Met
 35 40 45
 Val Gly Asn Gly Ile Asn Lys Leu Phe Glu Arg Ala Leu Pro Glu Gly
 50 55 60
 Glu Lys Thr Glu Glu Asn Val Leu Arg Val Arg Lys Glu Phe Leu Leu
 65 70 75 80
 His Tyr Asp Arg His Asn Ala Asp Glu Ser Arg Pro Tyr Pro Gly Ile
 85 90 95
 Pro Glu Leu Leu Glu Thr Leu Gln His Lys Gly Tyr Lys Leu Ala Val
 100 105 110
 Ala Ser Asn Lys Tyr Gln Ala Ala Thr Glu Lys Leu Ile Ala His Tyr
 115 120 125
 Phe Pro Gly Ile Arg Phe Val Ala Val Phe Gly Gln Arg Glu Gly Val
 130 135 140
 Lys Val Lys Pro Asp Pro Ala Val Val His Asp Ile Leu Gln Ile Ala
 145 150 155 160
 Asp Val Ser Lys Asp Glu Val Leu Tyr Val Gly Asp Ser Gly Val Asp
 165 170 175
 Met Gln Thr Ala Ile Asn Ser Gly Val Thr Ser Cys Gly Val Thr Gly
 180 185 190
 Gly Phe Arg Pro Arg Thr Gly Leu Gly Ile Arg Leu Ala Gly Ile Leu
 195 200 205

<210> 10399

<211> 171

<212> PRT

<213> B.fragilis

<400> 10399

Val	Lys	Val	Glu	Gln	Ile	His	Arg	Lys	Gly	Lys	Leu	Val	Thr	Ser	
1			5					10					15		
Gly	Met	Gly	Lys	Ala	Gly	Gln	Ile	Ala	Met	Asn	Ile	Ala	Thr	Thr	Phe
	20							25					30		
Cys	Ser	Thr	Gly	Ile	Pro	Ser	Val	Phe	Leu	His	Pro	Ser	Glu	Ala	Gln
	35						40				45				
His	Gly	Asp	Leu	Gly	Ile	Leu	Gln	Glu	Asn	Asp	Leu	Leu	Leu	Ile	
	50					55				60					
Ser	Asn	Ser	Gly	Lys	Thr	Arg	Glu	Ile	Val	Glu	Leu	Thr	Gln	Leu	Ala
	65				70				75			80			
His	Asn	Leu	Asn	Pro	Gly	Leu	Lys	Phe	Ile	Val	Ile	Thr	Gly	Asn	Pro
					85				90			95			
Asp	Ser	Pro	Leu	Ala	Ser	Glu	Ser	Asp	Val	Cys	Leu	Ser	Thr	Gly	His
			100					105				110			
Pro	Ala	Glu	Val	Cys	Thr	Leu	Gly	Met	Thr	Pro	Thr	Thr	Ser	Thr	Thr
	115					120				125					
Val	Met	Thr	Val	Ile	Gly	Asp	Ile	Leu	Val	Val	Gln	Thr	Met	Lys	Arg
	130				135				140						
Thr	Glu	Phe	Thr	Ile	Glu	Glu	Tyr	Ser	Lys	Arg	His	His	Gly	Gly	Tyr
	145				150				155			160			
Leu	Gly	Glu	Lys	Ser	Arg	Lys	Leu	Cys	Val	Lys					
			165				170								

<210> 10400

<211> 1030

<212> PRT

<213> B.fragilis

<400> 10400

Leu	Leu	Thr	Glu	Cys	Leu	Ala	Met	Cys	Ser	Leu	Ala	Thr	Met	Ala	Gln
1			5				10					15			
His	Asp	Glu	Trp	Lys	Asn	Pro	Glu	Ile	Asn	Ala	Val	Asn	Arg	Ala	Pro
			20				25				30				
Met	His	Thr	Asn	Tyr	Phe	Ala	Tyr	Ser	Ser	Ser	Glu	Glu	Ala	Ala	Lys
	35			40				45							
Ala	Asp	Lys	Glu	Asn	Ser	Ser	Asn	Phe	Met	Thr	Leu	Asn	Gly	Ile	Trp
	50			55				60							
Lys	Phe	Asn	Trp	Val	Lys	Asn	Ala	Asp	Ala	Arg	Pro	Thr	Asp	Phe	Tyr
	65			70				75			80				
Arg	Thr	Asp	Tyr	Asn	Asp	Lys	Gly	Trp	Gly	Gln	Met	Lys	Val	Pro	Gly
			85				90			95					
Val	Trp	Glu	Met	Asn	Gly	Tyr	Gly	Asp	Pro	Ile	Tyr	Val	Asn	Val	Gly
		100			105				110						
Tyr	Ala	Trp	Arg	Ser	Gln	Tyr	Lys	Asn	Asn	Pro	Pro	Tyr	Val	Pro	Ile
	115				120				125						
Glu	Asn	Asn	His	Val	Gly	Ser	Tyr	Arg	Lys	Glu	Ile	Ile	Ile	Pro	Ala
	130			135				140							
Glu	Trp	Ser	Glu	Lys	Glu	Ile	Phe	Ala	His	Phe	Gly	Ser	Val	Thr	Ser
	145			150				155			160				
Asn	Met	Tyr	Leu	Trp	Val	Asn	Gly	Lys	Tyr	Val	Gly	Tyr	Ser	Glu	Asp
			165				170			175					
Ser	Lys	Leu	Glu	Ala	Glu	Phe	Asn	Leu	Thr	Lys	Tyr	Leu	Lys	Pro	Gly
			180				185			190					
Lys	Asn	Leu	Ile	Ala	Phe	Gln	Val	Phe	Arg	Trp	Cys	Asp	Gly	Thr	Tyr
	195				200				205						
Leu	Glu	Asp	Gln	Asp	Phe	Phe	Arg	Tyr	Ser	Gly	Val	Gly	Arg	Asn	Cys

210	215	220	
Tyr Leu Tyr Ser Arg Asn Lys Lys Tyr Ile Gln Asp Ile Arg Val Thr			
225	230	235	240
Pro Asp Leu Asp Ser Asn Tyr Thr Asn Gly Thr Leu Asn Val Ala Leu			
245	250	255	
Asn Leu Asn Gly Ser Gly Thr Val Glu Leu Asn Leu Thr Asp Pro Ala			
260	265	270	
Gly Lys Ser Val Ala Thr Ala Gln Val Asn Gly Asn Gly Gln Lys Ser			
275	280	285	
Val Val Met Asp Val Ser Asn Pro Glu Lys Trp Thr Ala Glu Thr Pro			
290	295	300	
Asn Leu Tyr Thr Leu Thr Ala Thr Leu Lys Asn Gly Ser Asn Thr Leu			
305	310	315	320
Glu Val Ile Pro Val Lys Val Gly Phe Arg Lys Ile Glu Leu Lys Gly			
325	330	335	
Gly Gln Ile Leu Val Asn Gly Gln Pro Val Leu Phe Lys Gly Ala Asp			
340	345	350	
Arg His Glu Met Asp Pro Asp Gly Gly Tyr Val Val Ser Arg Glu Arg			
355	360	365	
Met Leu Gln Asp Ile Leu Arg Met Lys Gln Leu Asn Ile Asn Ala Val			
370	375	380	
Arg Thr Cys His Tyr Pro Asp Asp Asn Leu Trp Tyr Asp Leu Cys Asp			
385	390	395	400
Gln Tyr Gly Ile Tyr Val Val Ala Glu Ala Asn Ile Glu Ser His Gly			
405	410	415	
Met Gly Tyr Gly Lys Glu Thr Leu Ala Lys Asn Pro Ser Tyr Lys Lys			
420	425	430	
Ala His Met Glu Arg Asn Gln Arg Asn Val Gln Arg Gly Tyr Asn His			
435	440	445	
Pro Ser Ile Ile Phe Trp Ser Leu Gly Asn Glu Ala Gly Tyr Gly Pro			
450	455	460	
Asn Phe Glu Gln Cys Tyr Thr Trp Ile Lys Asn Glu Asp Lys Thr Arg			
465	470	475	480
Ala Val Gln Tyr Glu Gln Ala Gly Thr Asn Glu Phe Thr Asp Ile Phe			
485	490	495	
Cys Pro Met Tyr Tyr Asp Tyr Asp Ala Cys Lys Lys Tyr Ser Glu Gly			
500	505	510	
Asn Ile Asp Lys Pro Leu Ile Gln Cys Glu Tyr Ala His Ala Met Gly			
515	520	525	
Asn Ser Gln Gly Gly Phe Lys Glu Tyr Trp Asp Leu Ile Arg Lys Tyr			
530	535	540	
Pro Lys Tyr Gln Gly Gly Phe Ile Trp Asp Phe Val Asp Gln Ser Asn			
545	550	555	560
His Trp Lys Asn Lys Asp Gly Ile Asp Ile Tyr Gly Tyr Gly Asp			
565	570	575	
Phe Asn Lys Tyr Asp Ala Ser Asp Asn Asn Phe Asn Asp Asn Gly Leu			
580	585	590	
Ile Ser Pro Asp Arg Arg Pro Asn Pro His Ala His Glu Val Gly Tyr			
595	600	605	
Phe Tyr Gln Ser Ile Trp Thr Thr Pro Gly Asp Leu Ser Lys Gly Glu			
610	615	620	
Ile Lys Val Tyr Asn Glu Asn Phe Phe Arg Asp Leu Ser Ala Tyr Tyr			
625	630	635	640
Met Glu Trp Gln Leu Leu Ala Asn Gly Glu Val Met Gln Thr Gly Val			
645	650	655	
Val Gln Asp Leu Asn Val Ala Pro Gln Gln Thr Ala Thr Leu Lys Leu			
660	665	670	
Asn Leu Asn Thr Glu Lys Val Cys Pro Cys Lys Glu Leu Leu Leu Asn			
675	680	685	

Val Thr Tyr Lys Leu Lys Ala Ala Glu Thr Leu Met Pro Ala Gly Ser
 690 695 700
 Thr Val Ala Tyr Asp Gln Leu Thr Ile Arg Pro Tyr Thr Ala Lys Ala
 705 710 715 720
 Leu Glu Leu Lys Asn Gln Lys Ala Ser Asn Leu Asp Ile Val Val Pro
 725 730 735
 Val Ile Lys Asp Asn Asp His Asn Tyr Leu Ile Val Glu Gly Glu Asn
 740 745 750
 Phe Ile Ile Glu Phe Asn Lys His Asn Gly Tyr Leu Ser Arg Tyr Glu
 755 760 765
 Ala Asp Gly Met Gln Leu Leu Asn Pro Gly Ala Gln Leu Thr Pro Asn
 770 775 780
 Phe Trp Arg Ala Pro Thr Asp Asn Asp Tyr Gly Ala Gly Leu Gln His
 785 790 795 800
 Arg Tyr Ala Val Trp Lys Asn Pro Gly Leu Lys Leu Thr Ser Leu Lys
 805 810 815
 Gln Ser Ile Glu Asn Glu Gln Ala Ile Val Gln Ala Glu Tyr Glu Met
 820 825 830
 Lys Ala Val Lys Gly Lys Leu Phe Leu Thr Tyr Val Ile Asn Asn Glu
 835 840 845
 Gly Ala Val Lys Val Thr Gln Lys Met Glu Ala Gly Lys Glu Glu Lys
 850 855 860
 Val Ser Asp Met Phe Arg Phe Gly Met Gln Met Gln Met Pro Glu Asn
 865 870 875 880
 Phe Asn Glu Val Glu Tyr Tyr Gly Arg Gly Pro Val Glu Asn Tyr Ala
 885 890 895
 Asp Arg Asn His Ser Thr Leu Ile Gly Lys Tyr Arg Gln Thr Val Ala
 900 905 910
 Glu Gln Phe Tyr Pro Tyr Ile Arg Pro Gln Glu Thr Gly Thr Lys Thr
 915 920 925
 Asp Leu Arg Trp Trp Arg Val Leu Asn Ile Ser Gly Asn Gly Leu Gln
 930 935 940
 Phe Val Gly Asp Ala Pro Phe Ser Ala Ser Ala Leu Asn Tyr Ser Ile
 945 950 955 960
 Glu Ser Leu Asp Asp Gly Val Gln Lys Asp Gln Arg His Ser Pro Glu
 965 970 975
 Val Ala Lys Ala Pro Phe Thr Asn Leu Cys Ile Asp Lys Val Gln Met
 980 985 990
 Gly Leu Gly Cys Val Asn Ser Trp Gly Thr Leu Pro Leu Glu Lys Tyr
 995 1000 1005
 Arg Val Pro Tyr Gln Asp Tyr Glu Phe Ser Phe Ile Leu Thr Pro Val
 1010 1015 1020
 Arg His Lys Val Asn Met
 1025 1030

<210> 10401

<211> 450

<212> PRT

<213> B.fragilis

<400> 10401

Leu Tyr Arg Leu Tyr Ile Gln Asn Ile Ser Arg Lys Asp Lys Ile Phe
 1 5 10 15
 Ile Thr Phe Val Glu His Ile Asn Val Leu Leu Thr Met Glu Gln Leu
 20 25 30
 Leu His Tyr Val Trp Lys His Lys Ile Phe Pro Leu His Glu Leu Gln
 35 40 45
 Thr Thr Thr Gly Leu Pro Val Glu Val Ile Asp Thr Gly Leu Pro Asn
 50 55 60

Ser Asp Ser Gly Pro Asp Phe Phe Asn Ala Lys Leu Lys Ile Gly Gly
 65 70 75 80
 Thr Leu Trp Val Gly Asn Val Glu Ile His Thr Ala Ser Ser Asp Trp
 85 90 95
 Phe Arg His Gly His Asp Arg Asp Ile Ala Tyr Asp Ser Val Ile Leu
 100 105 110
 His Ile Val Thr Glu Ile Asp Cys Glu Ile Tyr Arg Ser Asn Gly Glu
 115 120 125
 Pro Val Pro Gln Leu Arg Leu Pro Cys Pro Glu Gln Val Lys Glu His
 130 135 140
 Tyr Asp Glu Leu Cys Arg Ala Asp Ile His Pro Pro Cys Tyr Ser Ile
 145 150 155 160
 Leu Glu Thr Leu Pro Lys Leu Thr Ile His Ser Trp Leu Thr Ala Leu
 165 170 175
 Gln Thr Glu Arg Phe Asp Gln Lys Asn Arg Thr Ile Thr Arg Arg Leu
 180 185 190
 Gln Arg Cys Asn Gln His Trp Glu Asp Ala Phe Ile Thr Leu Ala
 195 200 205
 Arg Asn Phe Gly Phe Gly Leu Asn Gly Asp Ala Phe Glu Thr Trp Ala
 210 215 220
 Asn Leu Leu Ser Phe Arg Ala Ile Asp Lys His Arg Asp Asp Leu Thr
 225 230 235 240
 Gln Val Glu Ala Phe Phe Phe Gly Gln Ala Gly Leu Leu Glu Gly Glu
 245 250 255
 Ser Ala Asp Asp Tyr Phe Ser Trp Met Gln Lys Glu Phe Arg Tyr Leu
 260 265 270
 Gln His Lys Phe Glu Leu Pro Pro Val Met Asn Pro Ser Leu Trp Arg
 275 280 285
 Phe Leu Arg Leu Arg Pro Gly Asn Phe Pro His Val Arg Leu Ala Gln
 290 295 300
 Leu Ala Ser Leu Tyr Tyr Arg Glu His Ser Leu Phe Ser Arg Val Met
 305 310 315 320
 Glu Ala Glu Thr Leu Lys Asp Leu Lys Gln Ile Phe Ala Gly His Thr
 325 330 335
 Ser Ala Tyr Trp Glu Glu His Phe Met Phe Gly Lys Ser Ser Pro Arg
 340 345 350
 Arg Glu Lys Ser Ile Gly Ala Gly Ala Lys Glu Leu Ile Ile Ile Asn
 355 360 365
 Thr Val Ile Pro Phe Leu Tyr Ala Tyr Gly Leu His Lys Ala Asp Glu
 370 375 380
 Arg Leu Cys Glu Arg Ala Ala Ser Leu Leu Glu Leu Lys Ala Glu
 385 390 395 400
 Asn Asn Tyr Val Thr Arg Met Trp Ser Gly Ala Gly Ile Pro Val Gln
 405 410 415
 Thr Ala Ala Asp Ser Gln Ala Leu Leu Gln Leu Gln Lys Glu Tyr Cys
 420 425 430
 Asp Lys Lys Lys Cys Leu Tyr Cys Arg Phe Gly Tyr Glu Tyr Leu Arg
 435 440 445
 His Lys
 450

<210> 10402

<211> 74

<212> PRT

<213> B.fragilis

<400> 10402

Glu Leu Phe Arg Leu Thr Val Val Gly Cys Asn Val Ser Thr Ala His
 1 5 10 15

Ser Gly Val Pro Pro Met Leu Lys Pro Phe Leu Pro Gln Pro Asp Asn
 20 25 30
 Lys Ala Lys Gln Asn Ala Asn Lys Thr Ile Leu Leu Phe Ile Pro Ser
 35 40 45
 Leu Tyr Ser Ile Phe Asn Asp Val His Phe Val Ala Lys Trp Phe Ile
 50 55 60
 Val Ile Thr Leu Ser Gly Ile Asp Glu Asn
 65 70

<210> 10403

<211> 275

<212> PRT

<213> B.fragilis

<400> 10403

Ala Ser Ile Arg His Trp Ala Ala Glu Glu Lys Ile Asn Phe Lys Tyr
 1 5 10 15
 Asn Thr Ile Met Ile Ser Pro Leu Ala Ser Ile Ala Pro Gly Ala Lys
 20 25 30
 Ile Gly Lys Asn Val Ile Ile Gln Pro Phe Ala Tyr Ile Glu Asp Asn
 35 40 45
 Val Glu Ile Gly Asp Asp Cys Ile Ile Met Pro Tyr Ala Ser Val Leu
 50 55 60
 Asn Gly Thr Arg Leu Gly Lys Gly Asn Lys Val Tyr Gln His Ala Val
 65 70 75 80
 Leu Gly Ala Glu Pro Gln Asp Phe His Tyr Lys Gly Glu Glu Ser Ser
 85 90 95
 Leu Ile Ile Gly Asp Asn Asn His Ile Arg Glu Asn Val Val Ile Ser
 100 105 110
 Arg Ala Thr Phe Gly Gly Asn Ala Thr Lys Ile Gly Asn Gly Asn Phe
 115 120 125
 Leu Met Asp Lys Val His Ile Cys His Asp Val Gln Ile Gly Asp Asn
 130 135 140
 Cys Val Ala Gly Ile Gly Thr Thr Ile Ala Gly Glu Cys Thr Leu Asp
 145 150 155 160
 Asp Cys Val Ile Leu Ser Gly Asn Val Thr Leu His Gln Tyr Cys His
 165 170 175
 Val Gly Gln Trp Thr Leu Val Gln Ser Gly Cys Arg Ile Ser Lys Asp
 180 185 190
 Val Pro Pro Tyr Ser Ile Met Ala Gly Asn Pro Val Glu Tyr His Gly
 195 200 205
 Val Asn Ala Val Val Leu Gln Gln His Lys Asn Thr Ser Glu Arg Val
 210 215 220
 Leu Arg His Ile Ala Asn Ala Tyr Arg Leu Ile Tyr Gln Gly Asn Phe
 225 230 235 240
 Ser Leu Gln Asp Ala Val Gln Lys Ile Ile Asp Gln Val Pro Met Ser
 245 250 255
 Glu Glu Ile Glu Asn Ile Val Ala Phe Val Lys Glu Ser Lys Arg Gly
 260 265 270
 Ile Val Lys
 275

<210> 10404

<211> 433

<212> PRT

<213> B.fragilis

<400> 10404

Thr Thr Ile Ser Phe Ile Val Phe Leu Cys Pro Gln Pro Asn Leu Ile

1	5	10	15
Val	Arg	Met	Lys
Gln	Leu	Ser	Thr
Arg	Ala	Glu	Met
Gln	Tyr	Asn	Ile
20	25	30	
His	Thr	Leu	Ser
Asn	Gly	Leu	Arg
Ile	Ile	His	Glu
Pro	Ser	Ser	Ser
35	40	45	
Lys	Val	Ala	Tyr
Cys	Gly	Phe	Ala
Val	Asp	Ala	Gly
50	55	60	
Ala	Glu	Asn	Glu
Gln	Gly	Met	Ala
His	Phe	Val	Glu
65	70	75	80
Lys	Gly	Thr	Arg
Lys	Arg	Lys	Ala
Trp	His	Ile	Leu
Asn	Arg	Met	Glu
85	90	95	
Asn	Val	Gly	Asp
Gly	Leu	Asn	Ala
Tyr	Thr	Asn	Lys
Asp	Glu	Glu	Thr
100	105	110	
Ile	Tyr	Ser	Ala
Phe	Leu	Thr	Glu
His	Phe	Gly	Arg
115	120	125	
Leu	Gly	Gly	Tyr
Arg	Phe	Pro	Phe
His	Leu	Ser	Ala
130	135	140	
Lys	Arg	Asp	Arg
Gly	Asp	Ile	Asp
Glu	Ile	Gln	Ser
145	150	155	160
Thr	Arg	Tyr	Glu
Pro	Ser	Glu	Asp
Leu	Ile	Phe	Asp
Asp	Phe	Glu	Asp
165	170	175	
Met	Ile	Phe	Arg
Asn	180	185	190
His	Pro	Leu	Gly
Gly	Arg	Asn	Ile
195	200	205	
Leu	Gly	Tyr	Arg
Arg	Phe	Pro	Phe
His	Leu	Ser	Ala
210	215	220	
Val	Arg	Gln	Val
Glu	Lys	Leu	Leu
225	230	235	240
Leu	Val	Asp	Leu
Pro	Leu	Val	Thr
245	250	255	
Glu	Asn	Gln	Arg
Arg	Thr	Ile	Pro
Thr	Pro	Leu	Tyr
260	265	270	
Val	His	Lys	Glu
Glu	Thr	His	Gln
275	280	285	
Ala	Asn	Val	Met
Tyr	Asp	Asp	Ile
290	295	300	
Gly	Asp	Phe	Gly
305	310	315	320
Leu	Arg	Arg	Gly
Val	Leu	Tyr	Thr
Tyr	Thr	Val	Glu
325	330	335	
Val	Asp	Thr	Cys
Asp	Leu	Lys	Leu
340	345	350	
Leu	Thr	Thr	Tyr
355	360	365	
Gly	Lys	Lys	Leu
Ile	Gly	Ile	Gly
370	375	380	
Val	Ala	Ser	Asp
Gly	Asn	Asn	Glu
385	390	395	400
Met	Ala	Lys	Thr
Arg	Phe	Leu	His
Ser	Arg	Arg	Ile
405	410	415	
Val	Val	Glu	Ala
Ala	Phe	Ala	Glu
Asn	Glu	Glu	Tyr
420	425	430	
Met	Ile	Leu	Ser
Arg	Tyr	Thr	Ile

<210> 10405

<211> 498

<212> PRT

<213> B.fragilis

<400> 10405

Lys Ile Asn Ile Met Arg Lys Ala Thr Arg Thr Gln Trp Ile Lys Cys
 1 5 10 15
 Ser Ile Ala Ile Leu Leu Tyr Leu Ile Phe Leu Ile Trp Val Lys Ser
 20 25 30
 Trp Trp Gly Leu Ile Val Val Pro Phe Ile Phe Asp Ile Tyr Ile Thr
 35 40 45
 Lys Lys Ile Pro Trp Ser Phe Trp Lys Lys Ser Lys Asn Pro Thr Val
 50 55 60
 Arg Ser Val Met Ser Trp Val Asp Ala Ile Val Phe Ala Leu Val Ala
 65 70 75 80
 Val Tyr Phe Val Asn Ile Tyr Val Phe Gln Asn Tyr Gln Ile Pro Ser
 85 90 95
 Ser Ser Leu Glu Lys Ser Leu Leu Val Gly Asp Phe Leu Tyr Val Ser
 100 105 110
 Lys Met Ser Tyr Gly Pro Arg Val Pro Asn Thr Pro Leu Ser Met Pro
 115 120 125
 Leu Ala Gln His Thr Leu Pro Ile Leu Asn Thr Lys Ser Tyr Ile Glu
 130 135 140
 Trp Pro Gln Trp Lys Tyr Lys Arg Val Pro Gly Phe Gly Lys Val Lys
 145 150 155 160
 Leu Asn Asp Ile Val Val Phe Asn Phe Pro Ala Gly Asp Thr Val Ala
 165 170 175
 Leu Asn Phe Gln Asp Ala Asp Phe Tyr Thr Leu Ala Tyr Asn Ile Gly
 180 185 190
 Lys Gln Ile Tyr Pro Asn Pro Ile Asp Met Asp Ser Leu Thr Arg Glu
 195 200 205
 Gln Gln Lys Thr Val Tyr Asp Leu Tyr Tyr Asn Ala Gly Arg Lys Glu
 210 215 220
 Ile Leu Ser Asn Pro Gln Arg Tyr Gly Lys Val Val Thr Arg Pro Val
 225 230 235 240
 Asp Arg Arg Glu Asn Tyr Val Lys Arg Cys Val Gly Leu Pro Gly Asp
 245 250 255
 Thr Leu Gln Ile Ile Asn Gly Gln Val Met Ile Asp Gly Lys Ala Ile
 260 265 270
 Glu Asn Pro Glu Asn Leu Gln Phe Asn Tyr Phe Val Gln Thr Thr Gly
 275 280 285
 Pro Tyr Ile Thr Glu Glu Met Phe Arg Glu Leu Gly Ile Ser Lys Ala
 290 295 300
 Asp Gln Arg Leu Thr Pro Glu Gly Ala Ser Tyr Glu Glu Gly Leu Ile
 305 310 315 320
 Glu Leu Gly Leu Asp Gly Arg Asn Ala Gln Gly Gly Leu Asn Pro Val
 325 330 335
 Tyr His Leu Pro Leu Thr Lys Lys Met Tyr Asp Thr Leu Ser Gly Asn
 340 345 350
 Lys Lys Leu Val Gly Lys Ile Val Ile Glu Pro Glu Glu Tyr Ser Gly
 355 360 365
 Glu Val Tyr Pro Leu Asn Leu Asn Thr His Trp Asn Arg Ser Asp Tyr
 370 375 380
 Gly Pro Ile Trp Ile Pro Ala Lys Gly Ala Thr Ile Thr Leu Thr Pro
 385 390 395 400
 Asp Asn Leu Pro Ile Tyr Glu Arg Cys Ile Thr Ala Tyr Glu Gly Asn
 405 410 415
 Lys Leu Glu Gln Lys Glu Asp Gly Ile Tyr Ile Asn Gly Val Lys Thr
 420 425 430
 Asn Gln Tyr Thr Phe Gln Met Asp Tyr Tyr Trp Met Met Gly Asp Asn
 435 440 445

Arg His Asn Ser Ala Asp Ser Arg Tyr Trp Gly Phe Val Pro Glu Asp
 450 455 460
 His Val Val Gly Lys Pro Ile Val Val Trp Leu Ser Leu Asp Lys Asp
 465 470 475 480
 Arg Asn Trp Phe Asp Gly Lys Ile Arg Trp Asn Arg Ile Phe Lys Trp
 485 490 495
 Val Asp

<210> 10406

<211> 112

<212> PRT

<213> B.fragilis

<400> 10406

Arg Ser Tyr Phe Leu Trp Ser Tyr Gly Gly Ile Ser Pro Pro Tyr Arg
 1 5 10 15
 Thr Trp Asn Pro Ser Gly Arg Asn Phe Ile Gly Lys Gln Gly Gly Lys
 20 25 30
 Leu Ile Leu Ile Met Val Trp Asp Glu Asn Gln Lys Gly Glu Pro Gly
 35 40 45
 Lys Arg Arg Lys Gly Leu Trp Val Leu Pro Leu Ile Glu Lys Glu Thr
 50 55 60
 Asp Ile Ser Leu Arg Val Phe Asp Leu Arg Pro Arg Pro Trp Ala Arg
 65 70 75 80
 Asn Tyr Pro Gly Phe Tyr Glu Asp Lys Arg Leu Leu Asp Arg Ser Ile
 85 90 95
 Leu Arg Ala Ile Trp Thr Arg Thr Phe Phe Asp Ile Asn Val Ala Cys
 100 105 110

<210> 10407

<211> 371

<212> PRT

<213> B.fragilis

<400> 10407

Leu Tyr His Val Thr Arg Ile Pro Ile Phe Ala Ile Ser Ala Phe Arg
 1 5 10 15
 Gln Ile Gln Thr Met Tyr Lys Asn Leu Phe Asn Leu Leu Thr Ile Leu
 20 25 30
 Leu Ile Leu Pro Ser Cys Thr Asp Met Ser Pro Asn Ile Ser Val Val
 35 40 45
 Cys Glu Glu Asn Asn Ile Gly Asn Cys Ile Leu Lys Trp Glu Thr Thr
 50 55 60
 Pro Leu Ile Lys Gly Gln Val Lys Val Tyr Thr Ser Asp Asn Pro Glu
 65 70 75 80
 Phe Ile Pro Glu Asp Asn Pro Val Ala Met Ala Asn Ile Ser Asp Ala
 85 90 95
 Arg Met Thr Ile Val Thr Asn Asp Pro Ser Arg Arg Ser Tyr Tyr Met
 100 105 110
 Leu Val Phe Asn Asp Lys Tyr Cys Val Lys Val Ala Pro Arg Asn Val
 115 120 125
 Asn Met Pro Gly Ile Gln Asn Phe Arg Asp Leu Gly Gly Tyr Lys Ser
 130 135 140
 Ala Thr Gly Lys His Val Arg Trp Gly Lys Leu Tyr Arg Ser Ala Gln
 145 150 155 160
 Ile Asp Ser Leu His Cys Phe Ala Leu Arg Lys Leu Gln Asn Leu Gly
 165 170 175
 Ile Lys Thr Ile Leu Asp Leu Arg Ser Glu Ser Glu Leu His Asn Thr

180	185	190
Pro Pro Leu Gln Lys Gly Phe Asn Val Val His Ile Pro	Ile Asn Thr	
195 200	205	
Gly Asp Met Glu His Ile Leu His Gly Ile Gln Gln Glu Lys Ile Lys		
210 215	220	
Thr Asp Thr Ile Tyr His Met Val Glu Ala Met Asn Arg Glu Leu Val		
225 230	235	240
Ala Lys Tyr Gln Lys Glu Tyr Lys Glu Ile Phe Asp Ile Leu Leu Asp		
245 250	255	
Lys Asn Ser Tyr Pro Val Val Ile His Cys Ser Ser Gly Lys Gly Arg		
260 265	270	
Thr Gly Ile Val Ser Ala Leu Ile Leu Ala Ser Leu Asp Val Asn Ala		
275 280	285	
Asp Ile Ile Met Glu Asp Tyr Arg Leu Ser Asn Asp Tyr Phe Asn Ile		
290 295	300	
Pro Lys Ala Ser Lys Tyr Ala Tyr Asn Leu Pro Val Asn Ser Gln Glu		
305 310	315	320
Ala Ile Thr Thr Leu Phe Ser Ala Lys Glu Asp Phe Leu Asn Ala Ala		
325 330	335	
Lys Asp Glu Ile Glu Arg Lys Tyr Gly Asp Val Pro Thr Tyr Leu Arg		
340 345	350	
Lys Ala Ile Gly Leu Gln Ser Glu Asp Ile His Arg Leu Arg Thr Ile		
355 360	365	
Leu Leu Glu		
370		

<210> 10408

<211> 214

<212> PRT

<213> B.fragilis

<400> 10408

Thr Met Lys Val Lys Lys Ile Ser Ile Ala Asn Val Glu Val Asp Ala		
1 5 10 15		
Leu Pro Glu Leu Leu Asp Lys Glu Lys Ile Gly Phe Gln Pro Ile Asp		
20 25 30		
Asn Val Asn Trp Glu Ala Tyr Pro Tyr Arg Pro Lys Val Glu Phe Arg		
35 40 45		
Ile Ala His Ser Asp Asp Ala Val Leu Leu His Phe Asn Val Lys Glu		
50 55 60		
Ala Ser Val Arg Ala Lys Tyr Gly Glu Asp Asp Gly Ser Val Trp Thr		
65 70 75 80		
Asp Ser Cys Val Glu Phe Phe Ser Val Pro Thr Gly Asp Gly Ile Tyr		
85 90 95		
Tyr Asn Ile Glu Cys Asn Cys Ile Gly Thr Ile Leu Ile Gly Ala Gly		
100 105 110		
Ala Glu Arg Asn Asn Arg Glu Arg Ala Ser Arg Glu Val Thr Asp Gln		
115 120 125		
Val Lys Arg Trp Ala Ser Leu Gly Arg Gln Pro Phe Asp Glu Arg Ile		
130 135 140		
Gly Glu Cys Asn Trp Glu Val Ala Leu Val Ile Pro Tyr Thr Ala Phe		
145 150 155 160		
Phe Lys His His Ile Thr Ser Leu Asp Gly Lys Thr Ile Thr Ala Asn		
165 170 175		
Phe Tyr Lys Cys Gly Asp Glu Leu Gln Thr Pro His Phe Leu Ser Trp		
180 185 190		
Asn Pro Ile Lys Ile Glu Lys Pro Asp Phe His Arg Pro Asp Phe Phe		
195 200 205		
Gly Thr Leu Glu Phe Glu		

210

<210> 10409

<211> 485

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (467), (474), (476), (481), (483)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10409

Cys	Val	Ser	Leu	His	Pro	Lys	Ile	Tyr	Arg	Asp	Leu	Met	Lys		
1							5				10		15		
Thr	Phe	Glu	Glu	Leu	Gly	Val	Ser	Pro	Glu	Ile	Arg	Lys	Ala	Ile	Glu
							20			25		30			
Glu	Met	Gly	Tyr	Glu	Asn	Pro	Met	Pro	Val	Gln	Glu	Glu	Val	Ile	Pro
							35			40		45			
Tyr	Leu	Leu	Gly	Glu	Asn	Asn	Asp	Val	Val	Ala	Leu	Ala	Gln	Thr	Gly
							50			55		60			
Thr	Gly	Lys	Thr	Ala	Ala	Phe	Gly	Leu	Pro	Leu	Ile	Gln	Lys	Ile	Asn
							65			70		75		80	
Val	Lys	Asn	Arg	Ile	Pro	Gln	Ser	Leu	Val	Leu	Cys	Pro	Thr	Arg	Glu
							85			90		95			
Leu	Cys	Leu	Gln	Ile	Ala	Gly	Asp	Leu	Asn	Asp	Tyr	Ser	Lys	Tyr	Ile
							100			105		110			
Asp	Gly	Leu	Lys	Val	Leu	Pro	Val	Tyr	Gly	Gly	Ser	Ser	Ile	Asp	Ser
							115			120		125			
Gln	Ile	Arg	Ser	Leu	Lys	Arg	Gly	Val	His	Ile	Ile	Val	Ala	Thr	Pro
							130			135		140			
Gly	Arg	Leu	Leu	Asp	Leu	Met	Glu	Arg	Lys	Thr	Val	Ser	Leu	Ala	Thr
							145			150		155		160	
Val	Thr	Asn	Val	Val	Met	Asp	Glu	Ala	Asp	Glu	Met	Leu	Asn	Met	Gly
							165			170		175			
Phe	Thr	Asp	Ser	Ile	Asn	Ala	Ile	Leu	Ala	Asp	Val	Pro	Gln	Glu	Arg
							180			185		190			
Asn	Thr	Leu	Leu	Phe	Ser	Ala	Thr	Met	Ser	Pro	Glu	Ile	Ala	Arg	Ile
							195			200		205			
Ser	Lys	Asn	Tyr	Leu	His	Asn	Ala	Lys	Glu	Ile	Thr	Ile	Gly	Arg	Lys
							210			215		220			
Asn	Glu	Ser	Thr	Ser	Asn	Val	Lys	His	Val	Val	Tyr	Thr	Val	His	Ala
							225			230		235		240	
Lys	Asp	Lys	Tyr	Ala	Ala	Leu	Lys	Arg	Ile	Val	Asp	Tyr	Tyr	Pro	Gln
							245			250		255			
Ile	Tyr	Gly	Ile	Ile	Phe	Cys	Arg	Thr	Arg	Lys	Glu	Thr	Gln	Glu	Ile
							260			265		270			
Ala	Asp	Lys	Leu	Met	Gln	Glu	Gly	Tyr	Asn	Ala	Asp	Ser	Leu	His	Gly
							275			280		285			
Glu	Leu	Ser	Gln	Ala	Gln	Arg	Asp	Thr	Val	Met	Gln	Lys	Phe	Arg	Ile
							290			295		300			
Arg	Asn	Ile	Gln	Ile	Leu	Val	Ala	Thr	Asp	Val	Ala	Ala	Arg	Gly	Leu
							305			310		315		320	
Asp	Val	Asp	Asp	Leu	Thr	His	Val	Ile	Asn	Tyr	Gly	Leu	Pro	Asp	Asp
							325			330		335			
Thr	Glu	Ser	Tyr	Thr	His	Arg	Ser	Gly	Arg	Thr	Gly	Arg	Ala	Gly	Lys
							340			345		350			
Thr	Gly	Thr	Ser	Ile	Ala	Ile	Ile	Asn	Leu	Arg	Glu	Lys	Gly	Lys	Met
							355			360		365			

Arg Glu Ile Glu Arg Ile Ile Gly Lys Lys Phe Ile Ala Gly Glu Met
 370 375 380
 Pro Thr Gly Lys Gln Ile Cys Glu Lys Gln Leu Leu Lys Val Ile Asp
 385 390 395 400
 Asp Leu Glu Lys Val Lys Val Asn Glu Glu Asp Ile Asn Asp Phe Met
 405 410 415
 Pro Glu Ile Tyr Arg Lys Leu Glu Trp Leu Ser Lys Glu Asp Leu Ile
 420 425 430
 Lys Arg Met Val Ser His Glu Phe Asn Arg Phe Val Asp Tyr Tyr Arg
 435 440 445
 Asn Arg Glu Glu Ile Glu Val Pro Thr Asp Ser Arg Arg Ser Ser Pro
 450 455 460
 Arg Gly Xaa Met Pro Thr Leu Phe Ser Xaa Phe Xaa Thr Leu Ser Ile
 465 470 475 480
 Xaa Pro Xaa Pro Leu
 485

<210> 10410

<211> 144

<212> PRT

<213> B.fragilis

<400> 10410

Gln Arg Gly Pro Phe Tyr Phe Tyr Ser Pro Phe Glu Thr Gly Gly Lys
 1 5 10 15
 Pro Met Lys Arg Leu Val Val Leu Leu Phe Gly Leu Val Gly Ala Ala
 20 25 30
 Leu Phe Met Ser Ala Ala Asn Ser Gly Asp Arg Val Leu Arg Asp Ser
 35 40 45
 Ile Phe His Val Tyr Arg Ser Met Pro Ala Asp Thr Thr Arg Thr Val
 50 55 60
 Phe Ala Lys Glu Ala Ala Met Gly His Val Lys Glu Ser Trp Ala Leu
 65 70 75 80
 Glu Leu Leu Asp Ser Ala Leu Val Phe Ala Arg Glu Ile Lys Asp Val
 85 90 95
 Glu Gly Glu Leu Glu Leu Gln Tyr Gly Ile Phe Arg Tyr Tyr Thr Phe
 100 105 110
 Arg Met Asp Gly Glu Asn Met Glu Lys Thr Cys Ala Thr Leu Arg Glu
 115 120 125
 Ala Cys Tyr Arg Tyr Val Phe Thr Thr Gly Leu Glu Gly Ala Ala Leu
 130 135 140

<210> 10411

<211> 375

<212> PRT

<213> B.fragilis

<400> 10411

Val Ile Phe Ala Asn Leu Thr Gln Asn Ile Lys Met Lys Gln Leu Ile
 1 5 10 15
 Leu Ser Gly Met Phe Val Val Cys Gly Leu Ser Val Ser Leu Ala Ser
 20 25 30
 Glu Lys Trp Ala Val Asp Ser Ile Asn Trp His Arg Ala Glu Gln Lys
 35 40 45
 Met Gln Glu Lys Asp Phe Gln Asp Ala Ala Leu Thr Tyr Lys Glu Leu
 50 55 60
 Ile Thr Lys Gly Asp Ser Leu Phe Val Asp Tyr Ala Gly Arg His Val
 65 70 75 80
 Glu Asp Met Arg Glu Gln Tyr Ser Ile Asp Glu Leu Asp Leu Gln Asn

85	90	95
Gly		
Met		
Gln		
Gln		
Lys		
Lys		
Ile		
Trp		
Lys		
Leu		
Val		
Phe		
Ile		
Thr		
Ile		
Leu		
100	105	110
Cys		
Leu		
Ala		
Val		
Leu		
Leu		
Phe		
Val		
Gly		
Leu		
Leu		
Tyr		
Leu		
Arg		
Arg		
Ala		
115	120	125
Glu		
Arg		
Lys		
Leu		
Leu		
Phe		
Ser		
Arg		
Glu		
Glu		
Leu		
Gln		
Lys		
Ala		
Arg		
130	135	140
Leu		
Ala		
Glu		
Glu		
Ser		
Val		
Arg		
Asn		
Lys		
Ser		
Val		
Phe		
Ile		
Asp		
Asp		
Glu		
Val		
Arg		
Ala		
Gly		
Phe		
Ile		
Leu		
Thr		
Pro		
Gly		
Ile		
Asp		
Asp		
Glu		
Val		
Arg		
Ala		
Leu		
Gly		
Phe		
Ile		
Asn		
Leu		
Val		
Asn		
Met		
Arg		
145	150	155
Ser		
His		
Glu		
Ile		
Lys		
Thr		
Pro		
Leu		
Asn		
Ala		
Leu		
Gly		
Phe		
Ile		
165	170	175
Ile		
Leu		
Ile		
Thr		
Pro		
Gly		
Ile		
Asp		
Asp		
Glu		
Val		
Arg		
Ala		
Gly		
Phe		
Ile		
Asn		
Leu		
Leu		
His		
Ile		
Val		
Asn		
Asp		
195	200	205
Val		
Val		
Asp		
Val		
Ser		
Cys		
Leu		
Asp		
Val		
Ala		
Asn		
Met		
Arg		
Ile		
Phe		
Glu		
Thr		
Val		
Asn		
210	215	220
Val		
Pro		
His		
Glu		
Val		
Val		
Ala		
Leu		
Cys		
Arg		
Asn		
Ile		
Lys		
Gln		
Thr		
Ser		
Ala		
Glu		
Met		
Ile		
Phe		
Glu		
Thr		
Gly		
Ile		
225	230	235
Arg		
Asn		
Ile		
Lys		
Gln		
Thr		
Ser		
Ala		
Glu		
Met		
Ile		
Phe		
Glu		
Thr		
Ile		
245	250	255
Ser		
Ala		
Leu		
Glu		
Met		
Glu		
Thr		
Asp		
Pro		
Cys		
Arg		
Leu		
Gln		
Gln		
Val		
Asn		
Leu		
260	265	270
Ile		
Asn		
Leu		
Leu		
Val		
Asn		
Ala		
Thr		
275	280	285
Thr		
Leu		
Thr		
Leu		
Arg		
Ile		
Asn		
Glu		
Ala		
Gly		
Val		
Pro		
Glu		
Phe		
Met		
Val		
290	295	300
Thr		
Asp		
Thr		
Gly		
Ile		
Pro		
Leu		
Glu		
Asn		
Gly		
Ile		
295	300	305
Ser		
Arg		
Phe		
Glu		
Lys		
Leu		
Asn		
Glu		
Gly		
Ile		
Gln		
Gly		
Thr		
325	330	335
Leu		
Ser		
Ile		
Cys		
Lys		
Leu		
Ile		
Ile		
Asn		
Arg		
Met		
Gly		
Gly		
Asp		
Ile		
Arg		
340	345	350
Val		
Asp		
Ser		
Thr		
Tyr		
Ser		
Lys		
Gly		
Ala		
Arg		
Phe		
Ile		
Phe		
Thr		
His		
Pro		
355	360	365
Leu		
Lys		
Gln		
Glu		
Asn		
Arg		
370	375	

<210> 10412

<211> 124

<212> PRT

<213> B.fragilis

<400> 10412

Pro		
Arg		
Asn		
Lys		
Tyr		
Ala		
Phe		
Ile		
Val		
Asn		
Val		
Tyr		
Asn		
Ala		
1	5	10
Met		
Val		
Gly		
His		
Thr		
Gly		
Ile		
Tyr		
Glu		
Ala		
Ile		
Glu		
Asn		
Ala		
Val		
20	25	30
Ala		
Val		
Asp		
Ala		
Cys		
Val		
Lys		
Asp		
Thr		
Ile		
35	40	45
Gly		
Tyr		
Glu		
Ala		
Ile		
Ile		
Asp		
His		
Gly		
Asn		
Ala		
Gly		
Leu		
Asn		
Pro		
Gly		
Thr		
Asn		
Leu		
Asn		
65	70	75
Pro		
Cys		
Val		
Tyr		
Val		
Thr		
Glu		
Asn		
Lys		
Glu		
Ala		
Lys		
Val		
Ala		
Asp		
Gly		
50	55	60
Leu		
Asn		
Glu		
Asp		
Gly		
Thr		
Pro		
Asn		
Leu		
Asn		
Pro		
65	70	75
Arg		
Leu		
Ala		
Asp		
Val		
Ala		
Pro		
Thr		
Ile		
Leu		
His		
Ile		
Leu		
Asp		
Met		
Val		
100	105	110
Gln		
Pro		
Ala		
Glu		
Met		
Thr		
Gly		
Cys		
Asn		
Leu		
Ile		
Lys		

115

120

<210> 10413

<211> 186

<212> PRT

<213> *B. fragilis*

<400> 10413

Asn	Lys	Leu	Ser	Asn	Pro	Met	His	Thr	Thr	Ile	Leu	Glu	Thr	Glu	Arg
1				5					10					15	
Leu	Leu	Leu	Arg	Pro	Phe	Arg	Glu	Thr	Asp	Leu	Gln	Glu	Leu	Phe	Glu
					20				25					30	
Cys	Cys	Gln	Asn	Pro	Asn	Leu	Gly	Asn	Asn	Ala	Gly	Trp	Glu	Pro	His
						35			40					45	
Lys	Asn	Ile	Glu	Asp	Ser	Lys	Glu	Val	Leu	His	Thr	Val	Phe	Met	Gly
						50			55					60	
Asn	Glu	Gly	Val	Phe	Ala	Ile	Ile	Leu	Lys	Glu	Asp	Asn	Ser	Leu	Val
						65			70					75	
Gly	Ser	Ile	Gly	Ile	Ile	Thr	Asp	Pro	Lys	Arg	Glu	Asn	Thr	Arg	Thr
						85				90					95
Arg	Met	Leu	Gly	Tyr	Trp	Leu	Lys	Glu	Cys	His	Trp	Gly	Lys	Gly	Met
						100				105					110
Ala	Ser	Glu	Ala	Thr	Arg	Thr	Ile	Leu	Asp	Tyr	Gly	Phe	Asn	Val	Leu
						115			120					125	
Gly	Leu	His	Leu	Ile	Ser	Ala	Asn	Cys	Tyr	Pro	His	Asn	Thr	Arg	Ser
						130			135					140	
Arg	Leu	Leu	Leu	Glu	Arg	Asn	Gly	Phe	Val	Tyr	Glu	Gly	Ile	Leu	His
						145			150					155	
Glu	Ala	Glu	Met	Thr	Tyr	Asp	Gly	His	Val	Tyr	Asp	His	Leu	Cys	Phe
						165				170					175
Tyr	Gln	Lys	Lys	Gly	Arg	Val	Pro	Met	Asp						
						180				185					

<210> 10414

<211> 65

<212> PRT

<213> *B. fragilis*

<400> 10414

<210> 10415

<211> 115

<212> PRT

<213> B.fragilis

<400> 10415

Asn	Glu	Lys	Thr	Asn	Lys	Asn	Met	Glu	Gln	Ser	Phe	Lys	Lys	Gly	Ile
1				5					10					15	
Val	Leu	His	Leu	Ala	Ser	Leu	Val	Glu	Tyr	Ser	Glu	Gly	Gly	Ile	Ile

20	25	30
Ser Lys Gln Leu Ile Lys Ser Pro Ala Gly Asn Ile Thr Leu Phe Ser		
35	40	45
Phe Asp Lys Gly Glu Gly Leu Ser Glu His Ser Ala Pro Phe Asp Ala		
50	55	60
Leu Val Gln Val Leu Glu Gly Ser Ala Asn Ile Val Val Asn Gly Gln		
65	70	75
Val Phe Thr Val Asn Ala Gly Glu Ser Ile Val Phe Pro Ala Asn Ala		
85	90	95
Pro His Ala Leu Thr Ala Ile Glu Arg Phe Lys Met Leu Leu Thr Met		
100	105	110
Ile Lys Glu		
115		

<210> 10416

<211> 404

<212> PRT

<213> B.fragilis

<400> 10416

Ser Asn Arg Ala Thr Met Asn Ser Lys Lys Val Leu Phe Ile Ile Phe			
1	5	10	15
Ile Cys Thr Leu Thr Val Thr Gly Cys Asp Thr Gln Glu Gln Thr Thr			
20	25	30	
Ile Asp Ser Gly Leu Thr Leu Ile Arg Ala Thr Gln Thr Leu Asp Ser			
35	40	45	
Leu Tyr Ala Asn Tyr Ser Val Ser Gly Thr Cys Leu Leu Ile Glu Asn			
50	55	60	
Tyr Pro Ser Asn Val Gly Asn Tyr Thr Ala Thr Tyr Leu Ala Ser Glu			
65	70	75	80
Glu Gln Lys Glu Ile Pro Asn Gln Tyr Ser Tyr Leu Trp Pro Tyr Ser			
85	90	95	
Gly Thr Phe Ser Ala Val Asn Ala Leu Trp Ala Ala Thr Gly Asp Glu			
100	105	110	
Ser Tyr Lys Thr Leu Leu Asp Asn Lys Val Leu Arg Gly Leu Glu Lys			
115	120	125	
Tyr Leu Asp Ile Ser Arg Ser Pro Ala Gly Tyr Ala Ser Tyr Ile Asn			
130	135	140	
Thr Ala Ser Gln Ser Asp Arg Phe Tyr Asp Asp Asn Ile Trp Leu Gly			
145	150	155	160
Ile Asp Phe Thr Asp Ala Tyr Leu Asn Thr Lys Glu Glu Lys Tyr Leu			
165	170	175	
Lys Lys Ala Gln Leu Ile Trp Glu Phe Ile Glu Ser Gly Ala Asp Asp			
180	185	190	
Lys Leu Gly Gly Ile Tyr Trp Cys Glu Gln Lys Lys Val Ser Lys			
195	200	205	
Asn Thr Cys Ser Asn Ala Pro Ala Ser Val Phe Ala Leu Lys Met Phe			
210	215	220	
Lys Ala Ile Arg Asp Ser Ser Tyr Leu Ile Lys Gly Gln Glu Leu Tyr			
225	230	235	240
Glu Trp Thr Lys Lys Arg Leu Gln Asp Ser Thr Asp Tyr Leu Tyr Phe			
245	250	255	
Asp Asn Ile Ser Leu Asp Gly Lys Ile Asp Lys Ser Lys Tyr Ala Tyr			
260	265	270	
Asn Ser Gly Gln Met Met Gln Ala Ala Thr Leu Leu Tyr Gln Leu Thr			
275	280	285	
Gly Cys Ser His Phe Leu Lys Asp Ala Gln Asn Ile Ala Lys Ala Cys			
290	295	300	
Tyr Asn Tyr Phe Phe Ile Asn Phe Ile Pro Glu Glu Pro Phe			

305	310	315	320
Lys Leu Leu Lys Lys	Gly Asp Val Trp Phe Thr Ala Val Met Leu Arg		
325	330	335	
Gly Phe Ile Glu Leu Tyr Gln Thr Asp His Asn Lys Thr Tyr Ile Asn			
340	345	350	
Ser Phe Asn Gln Asn Met Asp Tyr Ala Trp Glu His Val Arg Asp Glu			
355	360	365	
Lys Gly Leu Phe Asp Ile Asp Phe Ser Gly Arg Thr His Asp Asp Arg			
370	375	380	
Lys Trp Leu Leu Thr Gln Ala Ala Met Val Glu Met Tyr Ala Arg Leu			
385	390	395	400
Ala Val Thr Lys			

<210> 10417

<211> 310

<212> PRT

<213> B.fragilis

<400> 10417

Tyr Asp Met Ala Lys Ile Gln Ile Lys Ser Glu Lys Leu Thr Pro Phe			
1	5	10	15
Gly Gly Ile Phe Ser Ile Met Glu Lys Phe Asp Ser Met Leu Ser Pro			
20	25	30	
Val Ile Asp Ser Thr Leu Gly Gln Arg Cys Ser Ser Ile Phe Gly Tyr			
35	40	45	
Gln Phe Ser Glu Ile Val Arg Ser Leu Met Ser Val Tyr Phe Cys Gly			
50	55	60	
Gly Ser Cys Val Glu Asp Val Thr Ser Gln Leu Met Arg His Leu Ser			
65	70	75	80
Tyr His Pro Thr Leu Arg Thr Cys Ser Ser Asp Thr Ile Leu Arg Ala			
85	90	95	
Ile Lys Glu Leu Thr Gln Glu Asn Ile Ser Tyr Thr Ser Asp Gln Gly			
100	105	110	
Lys Thr Tyr Asp Phe Asn Thr Ala Asp Lys Leu Asn Thr Leu Leu Ile			
115	120	125	
Asn Ala Leu Val Ser Thr Gly Glu Leu Lys Glu Ile Glu Glu Tyr Asp			
130	135	140	
Val Asp Phe Asp His Gln Phe Leu Glu Thr Glu Lys Tyr Asp Ala Lys			
145	150	155	160
Pro Thr Tyr Lys Lys Phe Leu Gly Tyr Arg Pro Gly Val Tyr Val Ile			
165	170	175	
Gly Asp Lys Ile Val Tyr Ile Glu Asn Ser Asp Gly Asn Thr Asn Val			
180	185	190	
Arg Phe His Gln Ala Asp Thr His Lys Arg Phe Phe Ala Leu Leu Glu			
195	200	205	
Ser Gln Asn Ile Arg Val Asn Arg Phe Arg Ala Asp Cys Gly Ser Cys			
210	215	220	
Ser Ile Glu Ile Val Ser Glu Ile Glu Lys His Cys Lys His Phe Tyr			
225	230	235	240
Ile Arg Ala Asn Arg Cys Ser Ser Leu Tyr Asn Asp Ile Phe Ala Leu			
245	250	255	
Arg Gly Trp Lys Thr Glu Glu Ile Asn Gly Ile Gln Phe Asp Leu Ile			
260	265	270	
Pro Phe Leu Leu Arg Asn Gly Lys Ala Ser Ala Ile Val Leu Ser Ser			
275	280	285	
Arg Asp Lys Asp Ala Thr Val Ala Thr Leu Thr Cys Gly Lys Ala Asn			
290	295	300	
Thr Leu Thr Asp Ala Phe			

305

310

<210> 10418
 <211> 229
 <212> PRT
 <213> B.fragilis

<400> 10418

Asn	Tyr	Ser	Tyr	His	Pro	Asn	Arg	Glu	Ser	Ser	Tyr	Phe	Phe	Cys	Leu
1						5			10					15	
Tyr	Asn	Gln	Glu	Ile	Asn	Tyr	Lys	Thr	Lys	Asn	Arg	Lys	His	Met	Gln
						20			25					30	
Lys	Val	Leu	Phe	Ile	Thr	Thr	Ile	Leu	Leu	Thr	Leu	Phe	Ala	Leu	Ser
						35			40					45	
Ile	Arg	Ala	Glu	His	Asn	Pro	Arg	Lys	Arg	Pro	Asp	Val	Ser	Ala	Gln
						50			55					60	
Phe	Gln	Thr	Val	Ser	Gly	His	Ser	Ile	Ser	Leu	Asn	Gly	Ile	Gly	Leu
						65			70			75		80	
Ala	Tyr	Ser	Tyr	Glu	Tyr	Ala	Phe	Thr	Pro	Lys	Gly	Thr	Ile	Ile	Phe
						85			90			95			
Ser	Ala	Gly	Ser	Ser	Tyr	Ala	Phe	Gly	Arg	Ile	Leu	Gln	Leu	Lys	Met
						100			105			110			
Glu	Ser	Leu	Arg	Glu	Phe	His	Ile	Asp	Thr	Lys	Asp	Tyr	His	Leu	Val
						115			120			125			
Thr	Gly	Asp	Leu	Ala	Ile	Glu	Pro	Arg	Phe	Tyr	Tyr	Asn	Leu	Lys	Lys
						130			135			140			
Arg	His	Arg	Asn	Gly	Lys	Arg	Thr	Trp	Gly	Asn	Ser	Gly	Gly	Tyr	Leu
						145			150			155		160	
Ser	Val	Asn	Phe	Gly	Tyr	Ser	Phe	Pro	Ile	Thr	Ile	Thr	Ser	Gly	Val
						165			170			175			
Lys	Ala	Ala	His	Ile	Tyr	Val	Ile	Thr	Pro	Tyr	Trp	Gly	Phe	Arg	Arg
						180			185			190			
Val	Trp	Lys	His	Phe	Leu	Phe	Asp	Leu	Ser	Gly	Gly	Val	Gly	Tyr	Ile
						195			200			205			
Gly	Ser	Ser	Asn	Arg	Thr	Ser	Ala	Val	Tyr	Pro	Gly	Leu	Arg	Ile	Gly
						210			215			220			
Leu	Gly	Tyr	Arg	Phe											
															225

<210> 10419
 <211> 429
 <212> PRT
 <213> B.fragilis

<400> 10419

Ala	Met	Asn	Tyr	Thr	Tyr	Arg	Gln	Ile	Trp	Leu	Ile	Asn	Tyr	Pro	Val
1						5			10					15	
Met	Leu	Ser	Ile	Leu	Met	Glu	Gln	Leu	Ile	Asn	Ile	Thr	Asp	Ala	Val
						20			25			30			
Phe	Leu	Gly	His	Val	Gly	Glu	Val	Glu	Leu	Gly	Ala	Ser	Ala	Leu	Gly
						35			40			45			
Ser	Ile	Tyr	Tyr	Leu	Ala	Ile	Tyr	Met	Leu	Gly	Phe	Gly	Phe	Ser	Leu
						50			55			60			
Gly	Val	Gln	Val	Met	Val	Gly	Gln	Tyr	Asn	Gly	Lys	Gly	His	Tyr	Thr
						65			70			75		80	
Gly	Thr	Gly	Gly	Thr	Phe	Phe	Gln	Gly	Leu	Val	Phe	Leu	Cys	Val	Leu
						85			90			95			
Ala	Ile	Leu	Leu	Ser	Leu	Ser	Ser	Tyr	Phe	Phe	Ser	Pro	Phe	Leu	Leu
						100			105			110			

Arg Tyr Phe Val His Ser Ser Glu Ile Tyr Cys Ala Val Ile Asp Tyr
 115 120 125
 Leu Asp Trp Arg Cys Phe Gly Leu Leu Phe Ser Phe Pro Phe Leu Ala
 130 135 140
 Phe Arg Ser Phe Tyr Ile Gly Ile Val Arg Thr Asn Ala Leu Ser Trp
 145 150 155 160
 Ala Ala Leu Ala Ala Val Leu Ile Asn Ile Pro Cys Asn Tyr Trp Phe
 165 170 175
 Val Phe Val Leu Asp Arg Gly Ile Ala Gly Ala Ala Ile Ala Ser Ser
 180 185 190
 Leu Ser Glu Ala Ala Ser Leu Leu Ile Val Val Tyr Thr Trp Leu
 195 200 205
 Lys Ile Asp Arg Thr Asp Phe Gly Leu Lys Phe Ile Phe Asp Lys Cys
 210 215 220
 Leu Leu Val Glu Leu Trp His Leu Ser Val Trp Ser Ile Leu His Ala
 225 230 235 240
 Phe Ile Ser Val Val Pro Trp Phe Leu Phe Phe Val Val Ile Glu Arg
 245 250 255
 Leu Gly Glu Ala Gln Leu Ala Val Ser Asn Ile Ile Arg Ser Val Ser
 260 265 270
 Thr Ile Phe Phe Val Ile Val Asn Ser Phe Ala Ala Thr Thr Gly Ala
 275 280 285
 Leu Val Ser Asn Leu Ile Gly Ala Gly Glu Arg Gln Tyr Leu Phe Pro
 290 295 300
 Leu Cys Arg Lys Ile Leu Lys Leu Gly Tyr Ala Ile Gly Leu Pro Leu
 305 310 315 320
 Val Val Leu Ala Met Val Phe Arg Arg Gln Ile Thr Gly Phe Tyr Thr
 325 330 335
 Asp Ser Ser Gln Leu Ile Asn Ile Ser Ser Ile Pro Phe Ala Val Met
 340 345 350
 Leu Leu Asn Tyr Val Phe Ala Leu Pro Gly Tyr Val Tyr Ile Asn Ala
 355 360 365
 Val Thr Gly Thr Gly Lys Thr Arg Ile Ala Phe Trp Phe Gln Leu Ile
 370 375 380
 Thr Ile Val Ile Tyr Leu Phe Tyr Leu Tyr Leu Leu Ser His Tyr Thr
 385 390 395 400
 Ala Ser Leu Ala Val Tyr Leu Thr Ala Glu Tyr Leu Phe Val Ile Leu
 405 410 415
 Leu Ala Val Gln Ser Val Leu Tyr Leu Arg Ile Ser Ser
 420 425

<210> 10420

<211> 83

<212> PRT

<213> B.fragilis

<400> 10420

Val Pro Glu Gln Gln Lys Val Ala Gln Asp Phe Ala Met Ser Glu Phe
 1 5 10 15
 Ser Leu Ile Leu Val Leu Gln Lys Glu Asn Lys Gln Asn Ser Asn Met
 20 25 30
 Thr Trp Gln Lys Tyr Lys Leu Asn Leu Arg Asn Ser His Leu Leu Glu
 35 40 45
 Glu Phe Phe Gln Ser Trp Arg Asn Leu Thr Pro Cys Phe His Pro Leu
 50 55 60
 Ser Thr Gln His Trp Val Arg Asp Ala Ala Val Ser Ser Asp Ile Ser
 65 70 75 80
 Ser Ala Arg

<210> 10421
 <211> 84
 <212> PRT
 <213> B.fragilis

<400> 10421
 Phe Ala Tyr Lys Glu Ser Ser Val Cys Val Ala Arg Ile Arg Val Lys
 1 5 10 15
 Pro Leu Ser Ile Val Val Cys Ser Cys Val Ser His Pro Val Thr Val
 20 25 30
 Asn Val Gln Met Lys Met Met Lys Ser Thr Phe Phe Glu Phe Ile Val
 35 40 45
 Ala Leu Leu Asp Tyr Tyr Cys Val Ser Leu Leu Ser Phe Lys Glu Asp
 50 55 60
 Ile Phe Lys Ile Ser Ser Phe Pro Leu Phe Ile Lys Pro Leu Ser Pro
 65 70 75 80
 Asn Gln Phe Leu

<210> 10422
 <211> 231
 <212> PRT
 <213> B.fragilis

<400> 10422
 Lys Tyr Lys Lys Met Lys Lys Leu Ile Tyr Thr Leu Cys Leu Phe Thr
 1 5 10 15
 Gly Met Ala Ile Ser Ser Cys Glu Asp Trp Leu Ala Arg Asp Pro Leu
 20 25 30
 Asp Gln Ile Ala Asp Val Asn Leu Thr Tyr Thr Ala Asp Glu Cys Lys
 35 40 45
 Leu Tyr Val Asn Gln Phe Tyr Thr Ser Phe Trp Gly Ser Pro Asn Asn
 50 55 60
 Tyr Ile Tyr His Ile Asp Arg Gly Ser Asp Asn Leu Leu Ser Asp Asn
 65 70 75 80
 Tyr Gln Asp Asn Lys Asp Leu Ile Glu Gly Leu His Gln Val Pro Ser
 85 90 95
 Ser Gly Glu Gly Trp Gly Thr Thr Glu Trp Gly Lys Ile Arg Ser Val
 100 105 110
 Asn Phe Leu Leu Asp Asn Cys Asp Lys Ser Pro Glu Pro Glu Lys Ala
 115 120 125
 Arg Lys Tyr Ile Gly Glu Ala Tyr Phe Phe Arg Ala Met Leu Tyr Tyr
 130 135 140
 Glu Gln Phe Leu Arg Lys Phe Gly Gly Ala Pro Trp Ile Asp Lys Thr
 145 150 155 160
 Leu Asp Leu Glu Ser Gly Glu Leu Tyr Gly Pro Arg Leu Lys Arg His
 165 170 175
 Glu Leu Ala Asp Lys Ile Leu Asn Asp Met Asp Asp Ala Ile Asp Arg
 180 185 190
 Leu Pro Thr Tyr Ser Gln Gln Glu Thr Gly Arg Val Ser Lys Glu Ala
 195 200 205
 Ala Met Leu Tyr Lys Ala Arg Ile Ala Leu Leu Ser Ser Pro Arg Gly
 210 215 220
 Trp Lys Glu Gln Arg Ile Ser
 225 230

<210> 10423
 <211> 630

<212> PRT
 <213> B.fragilis

<400> 10423

Ile Met Lys Asn Lys Ser Ile Ala Ser Phe Met Ile Lys Ile Val Met
 1 5 10 15
 Met Pro Leu Leu Phe Thr Ile Ser Cys Val Asn Glu Ile Ser Glu Asp
 20 25 30
 Pro Val Asp Ile Pro Gly Glu Ile Pro Ile Arg Leu Ser Thr Gln Ile
 35 40 45
 Leu Cys Asn His Thr Arg Ala Ile Asn Asn Glu Phe Gln Glu Lys Asp
 50 55 60
 Ala Ile Gly Leu Tyr Val Leu Thr Gln Leu Ser Thr Ile Asn Gln Lys
 65 70 75 80
 Arg Tyr Ile Asp Asn Met Arg Phe Thr Cys Ser Gln Ala Thr Gly Phe
 85 90 95
 Glu Pro Glu Glu Thr Ile Tyr Tyr Pro Lys Gly Asp Gly Lys Cys Asp
 100 105 110
 Phe Ile Ser Tyr Tyr Pro Phe Gln Glu Thr Gly Ile Asn Gln Asp Gln
 115 120 125
 Ser Ile Met Gln Val Gln Ile His Thr Asp Gln Ser Ser Val Ser Lys
 130 135 140
 His Ser Leu Ser Asp Phe Met Ile Ala Thr Asn Ser Asp Ile Thr Pro
 145 150 155 160
 Ser Gln Asn Met Val Ser Met Glu Tyr Lys His Lys Leu Cys Lys Leu
 165 170 175
 Lys Ile Thr Ile Lys Pro Ala Pro Gly Glu Asp Ile Asp Glu Leu Leu
 180 185 190
 Asn Asp Asn Pro Ser Leu Ser Leu Asn Gly Phe His Ser Asp Ala Ser
 195 200 205
 Tyr Asp Phe Leu Thr Asp Arg Phe Glu Pro Ser Gly Gln Thr Ile Ser
 210 215 220
 Val Thr Pro His Gly Glu Trp Lys Ile Glu Asn Asn Ala Leu Thr Gly
 225 230 235 240
 Lys Glu Val Ile Leu Ile Pro Glu Lys Ile Glu Ser Asp Asn His Tyr
 245 250 255
 Ile Asn Ile Asp Ile Asn Gly Lys Ser Tyr Ser Cys Pro Phe Pro Asp
 260 265 270
 Asn Phe Gln Leu Ala Ser Glu Lys Asn Cys Ser Ile Ala Ile Ile Tyr
 275 280 285
 Lys Ser Ser Glu Gly Ile Gln Ile Asn Asn Phe Asp His Ser Ile Thr
 290 295 300
 Asp Trp Thr Glu Gly Asp Ser Gly Glu Thr Thr Ala Gln Glu Thr Ser
 305 310 315 320
 Gly Val Ile His Leu Ser Ala Leu Lys Phe Ser Lys Ser Asn Val Tyr
 325 330 335
 Lys Ala Ile Asn Glu Gly Thr Gln Val Ala Glu Ile Cys Lys Glu Tyr
 340 345 350
 Leu Leu Ala Asp Asn Ile Asp Ala Gln Ala Ile Val Val Tyr Pro Val
 355 360 365
 Leu Asn Gly Ala Thr Asp Leu Asn Asn Gly Thr Val Ile Cys Leu Leu
 370 375 380
 Asp Glu Pro Ala Ser Ile His Gly Gly Lys Val Ser Trp Asn Lys Val
 385 390 395 400
 Asn Asn Ala Leu Asp Tyr Thr Pro Gly Asn Gln Ser Ile Ile Ser Asp
 405 410 415
 Phe Tyr Ile Thr Gln Asp Asn Ser Ile Ser Ile Ser Lys Pro Glu Asn
 420 425 430
 Pro Leu Pro Val Arg Leu Gln Glu Glu Val Leu Thr Asp Ile Arg Asn

435	440	445
Thr Glu Thr Gln Thr Tyr Pro Ile Val Lys Ile Gly Ile Gln Tyr Trp		
450	455	460
Met Gly Arg Ser Leu Glu Ala Thr His Tyr Thr Asp Gly Lys Ala Ile		
465	470	475
Thr Leu Lys Lys Asp Phe Thr Thr Ala Gly Tyr Tyr Thr Gly Lys		
485	490	495
Phe Lys Asp Ala Pro Gln Asp Phe Tyr Phe Tyr Asn Ser Glu Ala Val		
500	505	510
Ile Ser Gly Lys Leu Ser Pro Gln Gly Trp Ser Ile Pro Thr Glu Thr		
515	520	525
Glu Trp Glu Leu Leu Lys Gln Tyr Ile Asn Asn Asp Ala Ser Lys Leu		
530	535	540
Lys Phe Gly Pro Trp Ser Ser Asp Glu Asn Gly Asp Lys Leu Pro Ile		
545	550	555
Leu Asn Ile Thr Gly Phe Asn Gly Val Pro Glu Gly Tyr Ile Leu Lys		
565	570	575
Ser Lys Asn Gly Tyr Thr Asn Gly Leu Tyr Thr Val Val Tyr Trp Ser		
580	585	590
Thr Asn Ser Ser Gly Asn Gln Thr Asn Arg Ala Ile Tyr Leu Leu His		
595	600	605
Thr Thr Asn Glu Ile Lys Asp Gly Asn Ile Thr Asp Arg Ala Leu Ser		
610	615	620
Val Arg Cys Ile Arg Lys		
625	630	

<210> 10424

<211> 277

<212> PRT

<213> B.fragilis

<400> 10424

Gln Ile Leu Lys Gln Thr Val Tyr Val Ser Ile Asn Pro Gln Asn His			
1	5	10	15
Pro Ile Met Asn Arg Phe Glu Asn Lys Ile Ile Ile Ile Thr Gly Ala			
20	25	30	
Ala Gly Gly Ile Gly Ala Ser Thr Thr Arg Arg Ile Val Ser Glu Gly			
35	40	45	
Gly Lys Val Ile Ile Ala Asp Tyr Ser Arg Glu Lys Ala Asp Gln Phe			
50	55	60	
Ala Ala Glu Leu Ser Asn Ser Gly Ala Asp Val Arg Pro Val Tyr Phe			
65	70	75	80
Ser Ala Thr Glu Leu Lys Ser Cys Lys Glu Leu Ile Thr Phe Thr Met			
85	90	95	
Lys Glu Tyr Gly Gln Ile Asp Val Leu Val Asn Asn Val Gly Gly Thr			
100	105	110	
Asn Pro Arg Arg Asp Thr Asn Ile Glu Thr Leu Asp Met Asp Tyr Phe			
115	120	125	
Asp Glu Ala Phe His Leu Asn Leu Ser Cys Thr Met Tyr Leu Ser Gln			
130	135	140	
Leu Val Ile Pro Ile Met Ser Ala Gln Gly Gly Asn Ile Val Asn			
145	150	155	160
Val Ala Ser Ile Ser Gly Ile Thr Ala Asp Ser Asn Gly Thr Leu Tyr			
165	170	175	
Gly Ala Ser Lys Ala Gly Val Ile Asn Leu Thr Lys Tyr Ile Ala Thr			
180	185	190	
Gln Thr Gly Lys Lys Asn Ile Arg Cys Asn Ala Val Ala Pro Gly Leu			
195	200	205	
Ile Leu Thr Pro Ala Ala Leu Asn Asn Leu Asn Glu Glu Val Arg Lys			

210	215	220
Ile Phe Leu Gly Gln Cys Ala Thr Pro Tyr Leu Gly Glu Pro Gln Asp		
225	230	235
Val Ala Ala Thr Ile Ala Phe Leu Ala Ser Glu Asp Ala Arg Tyr Ile		
245	250	255
Thr Gly Gln Thr Ile Val Val Asp Gly Gly Leu Thr Ile His Asn Pro		
260	265	270
Thr Ile Asn Leu Val		
275		

<210> 10425

<211> 71

<212> PRT

<213> B.fragilis

<400> 10425

Asn Lys Thr Lys Gln Ala Phe Ser Ile Pro Leu Tyr Asn Lys Cys Asn			
1	5	10	15
Arg Thr Ile Ala Lys Val Thr Tyr Thr Ile Glu Lys Tyr Asn Ile His			
20	25	30	
Ser Asn Ile Leu Asn Asp Gly Ser Leu Glu Cys Thr Gly Gln His Ile			
35	40	45	
Ile Ile Ser Val Ala Val Phe Ser Phe Phe Pro Tyr Phe Leu His Leu			
50	55	60	
Phe Tyr Lys Cys Phe His Leu			
65	70		

<210> 10426

<211> 320

<212> PRT

<213> B.fragilis

<400> 10426

Phe Ile Asp Asp Phe Glu Ser Lys Met Ile Phe Ile Leu Leu Val			
1	5	10	15
Gln Tyr Gln Arg Ser Ile Ser Leu Phe Tyr Leu Leu Ile Ile Lys Gly			
20	25	30	
Asn Ile Met Lys Lys Asn Leu Leu Val Gly Ala Leu Val Ser Ala			
35	40	45	
Phe Leu Leu Ala Ser Cys Ser Gly Gly Asp Lys Ser Lys Ala Pro Val			
50	55	60	
Val Ser Thr Ala Asp Ile Glu Asn Ala Ala Glu Val Ile Lys Tyr Tyr			
65	70	75	80
Asn Thr Ser Leu Gly Val Leu Lys Asp Met Val Lys Glu Lys Asp Val			
85	90	95	
Asn Ala Val Leu Asp Tyr Met Glu Gln Lys Gly Lys Ala Pro Ala Leu			
100	105	110	
Ser Ala Ile Val Pro Pro Ala Val Val Ser Lys Asp Ser Ala Ile Val			
115	120	125	
Leu Asn Pro Gly Asn Cys Phe Asn Glu Glu Thr Arg Gln Asn Leu Lys			
130	135	140	
Gln Asn Tyr Thr Gly Leu Phe Gln Ala Arg Thr Glu Phe Tyr Ala Asn			
145	150	155	160
Phe Asp Thr Tyr Leu Ser Tyr Leu Lys Lys Lys Asp Val Thr Asn Ala			
165	170	175	
Lys Lys Leu Leu Asp Val Asn Tyr Gln Leu Ser Thr Gln Met Ser Glu			
180	185	190	
Tyr Lys Gln Asn Ile Phe Asp Ile Leu Ser Pro Phe Thr Glu Gln Ala			
195	200	205	

Glu Leu Val Leu Leu Val Asp Asn Pro Leu Lys Ala Gln Ile Met Ser
 210 215 220
 Val Arg Lys Met Ser Ser Thr Met Gln Ser Ile Leu Asn Leu Tyr Ala
 225 230 235 240
 Arg Lys His Arg Met Asp Gly Pro Arg Ile Asp Leu Lys Val Ala Glu
 245 250 255
 Leu Thr Gln Gln Leu Asp Ala Ala Lys Lys Leu Pro Val Val Asn Gly
 260 265 270
 His Glu Gly Glu Met Lys Ser Tyr Gln Ala Phe Leu Ser Gln Val Glu
 275 280 285
 Thr Phe Ile Lys Gln Val Lys Lys Val Arg Glu Lys Gly Glu Tyr Ser
 290 295 300
 Asp Ala Asp Tyr Asp Met Leu Thr Ser Ala Phe Glu Thr Ser Ile Ile
 305 310 315 320

<210> 10427

<211> 90

<212> PRT

<213> B.fragilis

<400> 10427

Lys Arg Ala Glu Gly Phe Gly Leu Lys Ser Leu Leu Leu Thr Pro Leu
 1 5 10 15
 Gln Pro Pro Val Lys Thr Phe Ser Tyr Met Leu Phe Val Leu Ile Tyr
 20 25 30
 Phe Pro Cys Ile Ala Thr Leu Val Ala Ile Lys Gln Glu Ser Gly Ser
 35 40 45
 Trp Lys Trp Ala Ile Phe Thr Ala Gly Tyr Thr Thr Ala Leu Ala Trp
 50 55 60
 Leu Val Ser Phe Ala Val Tyr Gln Ile Gly Gly Met Phe Ser Pro Ile
 65 70 75 80
 Ala Trp Met Ser Asn Leu Leu Met Met Val
 85 90

<210> 10428

<211> 156

<212> PRT

<213> B.fragilis

<400> 10428

Arg Asn Met Asp Lys Val Ile Ile Asn Ser Tyr Glu Asp Phe Glu Lys
 1 5 10 15
 Leu Ile Gly Gln Gln Ile Gly Val Ser Asp Tyr Leu Glu Val Ser Gln
 20 25 30
 Glu Arg Ile Asn Leu Phe Ala Asp Ala Thr Leu Asp His Gln Trp Ile
 35 40 45
 His Val Asp Thr Glu Arg Ala Lys Val Glu Ser Pro Tyr His Ser Thr
 50 55 60
 Ile Val His Gly Tyr Leu Thr Leu Ser Leu Leu Pro His Leu Trp Asn
 65 70 75 80
 Gln Ile Ile Glu Val Asn Asn Leu Lys Met Met Ile Asn Tyr Gly Met
 85 90 95
 Asp Lys Met Lys Phe Gly Gln Ala Val Leu Ser Gly Gln Ser Val Arg
 100 105 110
 Leu Lys Ala Ser Leu His Ser Leu Thr Asn Leu Arg Gly Val Ala Lys
 115 120 125
 Ala Glu Ile Lys Phe Ala Ile Glu Ile Lys Asp Gln Pro Lys Lys Ala
 130 135 140
 Leu Glu Gly Ile Ala Ile Phe Leu Tyr Tyr Phe Asn

145

150

155

<210> 10429
<211> 286
<212> PRT
<213> B.*fragilis*

<400> 10429
 Ile Met Glu Gly Lys Lys Thr Thr Gln Glu Glu Tyr Gln Lys Cys Val
 1 5 10 15
 Asn Ala Val Val Asp Tyr Ile Asn Leu His Leu Gly Glu Glu Ile Asp
 20 25 30
 Leu Lys Ser Leu Ala Arg Ile Ser His Phe Ser Pro Phe Tyr Phe His
 35 40 45
 Arg Ile Met Lys Ala Phe Leu Gly Glu Pro Ile Gly Thr Phe Ile Val
 50 55 60
 Arg Thr Arg Thr Glu Ala Ala Ala Arg Leu Leu Arg Tyr Ser Ser Thr
 65 70 75 80
 Ser Ile Ser Asp Ile Ala Tyr Arg Ile Gly Tyr Ala Ser Pro Ser Ser
 85 90 95
 Phe Ser Lys Ile Phe Lys Gln Met Tyr Gly Ile Ser Pro Thr Glu Tyr
 100 105 110
 Arg Asn Asn Lys Asn Tyr Val Ile Met Lys Pro Ala Ile Ile Lys Pro
 115 120 125
 Asp Leu Glu Leu Lys Lys Glu Ile Arg Glu Leu Pro Gln Arg Asn Val
 130 135 140
 Ile Tyr Ile Arg Leu Phe Gly Asp Tyr Lys Leu Asn Asp Tyr Ala Gly
 145 150 155 160
 Thr Trp Met His Leu Ile Gln Phe Val Lys Glu Gln Asn Leu Pro Met
 165 170 175
 Gly Asp Pro Ser Pro Leu Cys Ile Tyr His Asp Asp Pro Lys Val Thr
 180 185 190
 Pro Thr Asp Lys Leu Arg Thr Asp Val Cys Met Leu Leu Pro Ser Asn
 195 200 205
 Ala Arg Pro Lys Gly Asn Val Gly Phe Lys Gln Leu Pro Ala Gly Arg
 210 215 220
 Tyr Ala Thr Phe Leu Tyr Lys Gly Ser Tyr Asp Gln Leu Gln Ala Val
 225 230 235 240
 Tyr Asp Thr Ile Tyr Gly Lys Tyr Leu Pro Glu Met Glu Cys Thr Leu
 245 250 255
 Ser Asp Glu Pro Ser Ala Glu Arg Tyr Leu Asn Asp Pro Ser Cys Thr
 260 265 270
 Pro Pro Glu Glu Leu Leu Thr Glu Ile Tyr Ile Pro Ile Arg
 275 280 285

<210> 10430
<211> 134
<212> PRT
<213> *B. fragilis*

<400> 10430
 Asn Ile Arg Met Asn Val Ile Leu Phe Asp Gly Ile Cys Asn Leu Cys
 1 5 10 15
 Asn Gly Ala Val Thr Phe Val Val Lys Arg Asp Arg Lys Gly Leu Phe
 20 25 30
 Arg Phe Val Ser Leu Gln Ser Glu Thr Gly Lys Ser Leu Leu Lys Arg
 35 40 45
 Tyr Ala Val Glu Ser Thr Asn Lys Thr Leu Tyr Tyr Phe Arg Asn Asn
 50 55 60

Arg Cys Tyr Ser Lys Ser Thr Ala Ile Leu Tyr Ile Leu Lys Asp Leu
 65 70 75 80
 Gly Gly Phe Trp Gln Cys Leu Tyr Pro Leu Ile Leu Ile Pro Ala Lys
 85 90 95
 Leu Arg Asp Ala Ile Tyr Leu Leu Val Ser Lys Tyr Arg Tyr Arg Ile
 100 105 110
 Phe Gly Lys Ala Asp Ser Cys Ile Lys Pro Phe Gly Phe Ser Ser Glu
 115 120 125
 Glu Ser Lys Arg Ser Asp
 130

<210> 10431

<211> 245

<212> PRT

<213> B.fragilis

<400> 10431

Lys Asn Asn Val Leu Gly Lys Phe Ile Leu Asp Phe Phe Asn Ile Phe
 1 5 10 15
 Val Glu Ile Lys Ser Tyr Leu Asn Thr Met Asn Val Lys Ile Glu Ser
 20 25 30
 Ser Trp Gln Gln Arg Leu Gln Glu Glu Phe Asp Lys Pro Tyr Phe Glu
 35 40 45
 Lys Leu Val Asn Phe Val Lys Asn Glu Tyr Gly Lys Ala His Ile Leu
 50 55 60
 Pro Pro Gly His Gln Ile Phe His Val Phe Asn Ser Cys Pro Phe Gln
 65 70 75 80
 Asn Val Lys Val Val Ile Leu Gly Gln Asp Pro Tyr Pro Asn Pro Gly
 85 90 95
 Gln Tyr Tyr Gly Ile Cys Phe Ser Val Pro Asp Gly Val Ala Ile Pro
 100 105 110
 Gly Ser Leu Ser Asn Ile Phe Lys Glu Ile His Gln Asp Leu Gly Lys
 115 120 125
 Pro Leu Pro Asn Ser Gly Asn Leu Asp Arg Trp Val Lys Gln Gly Val
 130 135 140
 Phe Pro Met Asn Ser Val Leu Thr Val Arg Ala His Glu Thr Gly Ser
 145 150 155 160
 His Arg Asn Ile Gly Trp Glu Thr Phe Thr Asp Ala Val Ile Lys Lys
 165 170 175
 Leu Ser Glu Glu Arg Glu Asn Leu Val Phe Met Leu Trp Gly Ser Tyr
 180 185 190
 Ala Lys Glu Lys Ala Ser Leu Ile Asp Thr Asp Lys His Leu Ile Leu
 195 200 205
 Thr Ala Val His Pro Ser Pro Arg Ser Ala Asp Tyr Gly Phe Phe Gly
 210 215 220
 Cys Lys His Phe Ser Lys Ala Asn Thr Phe Leu Arg Ser Arg Gly Ile
 225 230 235 240
 Glu Glu Ile Asp Trp
 245

<210> 10432

<211> 1062

<212> PRT

<213> B.fragilis

<400> 10432

Lys Ile Asn Val Phe Leu Ile Lys Val Ser Ile Met Lys Ile Lys Lys
 1 5 10 15
 His Ile Leu Ile Pro Leu Met Val Leu Leu Phe Gly Ser Met Asp

20	25	30
Ala Met Ala Ala Ile Glu Gln Ala Ile Gln Val Lys Gly Lys Val Val		
35	40	45
Asp Asn Ile Gly Glu Pro Val Ile Gly Ala Asn Val Val Val Lys Gly		
50	55	60
Thr Thr Thr Gly Val Ile Thr Ser Ile Asp Gly Ser Phe Ala Ile Asp		
65	70	75
Ala Val Lys Gly Ser Thr Ile Val Val Ser Phe Ile Gly Tyr Leu Ser		
85	90	95
Gln Glu Val Lys Val Thr Gly Asn Phe Leu Asn Ile Thr Leu Glu Asn		
100	105	110
Asn Thr Glu Leu Leu Asp Glu Val Val Val Gly Tyr Gly Val Gln		
115	120	125
Lys Lys Ala Asn Leu Thr Gly Ala Ile Ala Thr Val Gly Ala Lys Glu		
130	135	140
Leu Glu Asp Arg Pro Val Thr Asn Ala Ala Ala Leu Gln Gly Lys		
145	150	155
Val Ala Asn Leu Asn Ile Ser Asn Gly Asp Gly Gly Pro Gly Lys Lys		
165	170	175
Ala Ser Phe Asn Ile Arg Gly Tyr Ala Gly Leu Asp Ala Thr Tyr Ser		
180	185	190
Pro Leu Val Ile Ile Asp Gly Val Thr Gly Tyr Phe Asp Asp Leu Asn		
195	200	205
Pro Asn Asp Ile Glu Thr Leu Thr Val Leu Lys Asp Ala Ala Ala Ser		
210	215	220
Ala Ile Tyr Gly Ala Gln Ala Ala Tyr Gly Val Ile Leu Val Thr Thr		
225	230	235
Lys Ser Gly Lys Lys Asn Glu Lys Thr Val Ile Asn Tyr Asn Asn Asn		
245	250	255
Phe Ser Phe Asn Ser Pro Thr Val Leu Pro Lys Thr Pro Gly Ser Leu		
260	265	270
Glu Phe Ser Arg Leu Phe Arg Glu Ala Asp Ile Asn Gly Gly Ser		
275	280	285
Gly Ile Ile Asp Leu Glu Thr Met Glu Arg Ile Glu Lys Tyr Tyr Tyr		
290	295	300
Asp Pro Thr Ser Ile Pro Asn Asn Val Pro Gln Arg Asp Asn Pro Asp		
305	310	315
Arg Trp Ala Asp Trp Gly Asp Gly Arg Ser Asn Ala Asn Glu Asp Trp		
325	330	335
Gln Lys Ala Met Phe Lys Asn Asn Gln Leu Asn Gln Gln His Asn Ile		
340	345	350
Ser Ile Arg Gly Gly Ser Asp Lys Thr Thr Tyr Val Met Ser Leu Gly		
355	360	365
Tyr Leu Lys Asp Glu Gly Lys Leu Arg Tyr Tyr Asp Asp His Tyr Gln		
370	375	380
Arg Tyr Asn Ala Leu Ala Lys Ile Thr Thr Asp Val Thr Lys Trp Leu		
385	390	395
Thr Val Gly Leu Asn Val Arg Tyr Ser His Glu Lys Ser Val Ser Pro		
405	410	415
Ala Tyr Gly Met Asn Pro Gly Gly Ser Val Asn Asp Met Ile Gly Trp		
420	425	430
Thr Gln Val Val Trp Pro Thr Ile Pro Val Arg Asp Pro Asn Gly His		
435	440	445
Phe Ser Pro Ala Gly Arg Met Val Phe Ile Ala Asp Ala Asn Pro Gln		
450	455	460
Thr Ser Tyr Thr Asp Asn Phe Trp Gly Thr Ala Asn Val Val Ile Lys		
465	470	475
Pro Leu Lys Gly Trp Thr Ile Asn Ala Asp Phe Thr Tyr Asn Lys Trp		
485	490	495

Met Asn Lys Arg Ser Tyr Ser Lys Gly Leu Ile Tyr Ser Tyr Ser Val
 500 505 510
 Ser Asn Glu Pro Tyr Leu Glu Gly Gly Phe Gly Thr Glu Asp Thr Arg
 515 520 525
 Val Trp Gln Glu Ser Asn Asn Asp Asp Phe Thr Ser Met Asn Ala Tyr
 530 535 540
 Thr Thr Tyr Glu Lys Glu Phe Lys Gly His Asn Phe Lys Ile Met Ala
 545 550 555 560
 Gly Met Gln Ser Glu Tyr Lys Lys Asn Phe Gly Leu Tyr Ala Asn Lys
 565 570 575
 Met Gly Met Val Leu Pro Gly Gln Pro Ser Ile Ser Thr Ser Thr Gly
 580 585 590
 Lys Ile Glu Ala Trp Asp Ser Leu Asp His Tyr Ala Thr Leu Gly Phe
 595 600 605
 Phe Gly Arg Phe Asn Tyr Asp Tyr Lys Ser Arg Tyr Leu Phe Glu Phe
 610 615 620
 Asp Leu Arg Arg Asp Gly Ser Ser Arg Tyr Ala Lys Gly His Gln Trp
 625 630 635 640
 Gly Thr Phe Pro Ala Phe Ser Ala Gly Trp Asn Val Ala Lys Glu Ala
 645 650 655
 Phe Phe Glu Pro Tyr Thr Ser Ile Leu Ser Glu Leu Arg Leu Arg Gly
 660 665 670
 Ser Trp Gly Glu Leu Gly Asn Met Arg Gly Lys Asn Tyr Gln Tyr Ile
 675 680 685
 Ser Thr Val Pro Tyr Asn Ala Thr Thr Asp Tyr Ile Met Gly Asp Lys
 690 695 700
 Arg Ile Ser Ala Phe Gly Ala Pro Asn Met Ile Ala Tyr Asn Thr Trp
 705 710 715 720
 Glu Lys Asn Arg Thr Leu Asp Phe Gly Val Asp Ile Ala Ala Leu Asn
 725 730 735
 Asn Arg Leu Thr Met Ser Phe Asp Trp Tyr Arg Arg Asp Ile Ile Gly
 740 745 750
 Leu Ile Thr Lys Gly Val Thr Leu Pro Ala Val Leu Gly Val Asn Ser
 755 760 765
 Pro Asp Thr Asn Asn Ala Asp Ile Arg Asn Glu Gly Trp Glu Leu Thr
 770 775 780
 Leu Gly Trp Arg Asp Gln Phe Ser Leu Ala Ser Lys Ser Phe Asn Tyr
 785 790 795 800
 Ser Val Ser Phe Asn Leu Ser Asp Tyr Gln Gly Thr Val Leu Lys Tyr
 805 810 815
 Ser Asn Pro Lys Gly Leu Ile Tyr Asp Tyr Val Gly Lys Lys Met
 820 825 830
 Gly Thr Ile Trp Gly Tyr Thr Asp His Ile Met Thr Asp Pro Ala
 835 840 845
 Glu Ala Lys Ala Ile Asn Asp Ser Gly Val Gln Asn Lys Phe Gly Gly
 850 855 860
 Asp Trp Val Val Gly Asp Ile Lys Tyr Val Asn Leu Asp Asp Asp Pro
 865 870 875 880
 Asn Ile Asn Asp Gly Asn Gln Thr Leu Glu Asp His Gly Asp Leu Ser
 885 890 895
 Ile Ile Gly Asn Asp Thr Pro Arg Tyr Asn Phe Gly Phe Gly Asn
 900 905 910
 Ala Asp Trp Asn Gly Ile Asp Phe Ser Met Phe Leu Gln Gly Thr Met
 915 920 925
 Lys Arg Asp Leu Trp Leu Glu Gly Pro Val Ala Phe Gly Leu Gly Gly
 930 935 940
 Gly Gln Trp Gly Ser Asn Val Trp Lys Asn Thr Leu Asp Cys Trp Arg
 945 950 955 960
 Glu Asp Gly Ser Asn Pro Asp Pro Trp Leu Pro Arg Leu Tyr Leu Trp

965	970	975	
Ser Thr Ser Lys Asn Leu Gln Lys Gln	Thr Arg Tyr Met Asp Thr Gly		
980	985	990	
Ala Tyr Cys Arg Leu Lys Asn Ile Gln Leu Gly	Tyr Ser Leu Pro Gly		
995	1000	1005	
Ala Ile Ile Asn Lys Val Gly Leu Glu Lys Val	Arg Ile Tyr Phe Ser		
1010	1015	1020	
Gly Asp Asn Leu Leu Thr Phe Ser Gly	Ile Asn Glu Asn Phe Asp Pro		
1025	1030	1035	1040
Glu Ala Pro Trp Gly Gly Ala Tyr Pro Ile Ser Lys	Ser Ile Ser Phe		
1045	1050	1055	
Gly Val Asn Val Thr Phe			
1060			

<210> 10433

<211> 105

<212> PRT

<213> B.fragilis

<400> 10433

Arg His Pro Val Arg Pro His Ser Ile Leu Val Glu Lys Trp Glu Gly			
1	5	10	15
Lys Cys Tyr Arg Leu Val Ile Gln Arg Gln Arg Arg Asn Ser Gly Asp			
20	25	30	
Leu Asp Leu Trp Glu Gly Glu Tyr Thr Tyr Arg Cys Ile Leu Thr Asn			
35	40	45	
Asp Tyr Lys Ser Ser Thr Arg Asp Ile Ala Glu Phe Tyr Asn Leu Arg			
50	55	60	
Gly Gly Lys Glu Arg Ile Phe Asp Asp Met Asn Asn Gly Phe Ser Trp			
65	70	75	80
Ser Arg Leu Pro Lys Ser Phe Met Ala Glu Asn Thr Val Phe Leu Leu			
85	90	95	
Leu Thr Ala Leu Tyr Thr Ile Tyr Tyr			
100	105		

<210> 10434

<211> 246

<212> PRT

<213> B.fragilis

<400> 10434

Lys Met Lys Val Met Lys Asp Tyr Lys Leu Met Ala Val Gly Gln Ile			
1	5	10	15
Val Ala Asp Cys Phe Asp Tyr Ala Lys Val Phe Asn Lys Tyr Gly Ile			
20	25	30	
Asp Phe Cys Cys Asn Gly Asp Val Ser Leu Ala Asp Ala Cys Gly Lys			
35	40	45	
Met Gly Ile Asp Ala Asp Cys Leu Leu Glu Glu Leu Lys Gln Ile Lys			
50	55	60	
Ser Glu Gln Ser Leu Thr Leu Asp Phe Lys Ser Trp Pro Ile Asp Leu			
65	70	75	80
Leu Val Asp Tyr Ile Leu Lys Phe His His Arg Asn Ile Arg Tyr Gln			
85	90	95	
Gly Pro Gln Ile Leu Gln Leu Asp Arg Val Cys Glu Ala His Ala			
100	105	110	
Arg Lys His Pro Glu Leu Tyr Glu Val Arg Glu Leu Phe Gln Glu Ser			
115	120	125	
Trp Ile Asp Leu Asn Asn His Leu Thr Lys Glu Glu Met Val Leu Phe			
130	135	140	

Pro Tyr Ile Tyr Asp Leu Phe Asp Ala Val Ala Gln His Arg Pro Ile
 145 150 155 160
 Pro Ala Phe His Cys Gly Ser Val Ser Ser Pro Ile Ser Val Met Met
 165 170 175
 Ser Glu His Asp Ala Glu Gly Glu Arg Phe Arg Arg Ile Ser Gly Leu
 180 185 190
 Thr His Gly Tyr Leu Val Pro Gly Asp Ala Cys Ser Ser Tyr Arg Leu
 195 200 205
 Leu Leu Glu Met Leu Arg Thr Phe Glu Asp Asn Leu His His His Ile
 210 215 220
 His Leu Glu Asn Asn Ile Val Phe Pro Lys Ala Ile Glu Leu Gln Glu
 225 230 235 240
 Asn Cys Glu Arg Met Cys
 245

<210> 10435

<211> 67

<212> PRT

<213> B.fragilis

<400> 10435

Phe Glu Lys Asn Gly Leu Asn Leu Arg Leu Ser Tyr Asn Phe Ala Ser
 1 5 10 15
 Ala Phe Ile Asp Gly Met Gly Glu Asp Thr Phe His Asp Arg Tyr Tyr
 20 25 30
 Asp Arg Val Asn Tyr Leu Asp Val Asn Ala Ser Tyr Thr Phe Ala Lys
 35 40 45
 His Tyr Thr Leu Tyr Ala Glu Ser Asn Asn Leu Val Glu Thr Pro Leu
 50 55 60
 Arg Phe Tyr
 65

<210> 10436

<211> 815

<212> PRT

<213> B.fragilis

<400> 10436

Arg Leu Ser Val Met Gly Gly His Leu Tyr Ala Asp Glu Lys Ala Asn
 1 5 10 15
 Val Val Lys Gln Gly Thr Ile Arg Gly Arg Ile Ile Asp Thr Ser Lys
 20 25 30
 Gln Thr Leu Pro Gly Ala Ser Ile Tyr Ile Glu Asn Leu Lys Thr Gly
 35 40 45
 Val Ile Ser Asp Val Asn Gly Phe Tyr Thr Phe Ala Asn Leu Asn Pro
 50 55 60
 Gly Thr Tyr Thr Val Lys Val Thr Tyr Val Gly Tyr Ala Pro Val Glu
 65 70 75 80
 Met Lys Ile Thr Ile Pro Glu Gly Lys Thr Leu Glu Arg Asp Val Ile
 85 90 95
 Leu Asn Glu Gly Val Glu Leu Gln Glu Ile Val Ile Gly Gly Ala Phe
 100 105 110
 Gln Gly Gln Arg Arg Ala Ile Asn Ser Gln Lys Ser Ser Leu Gly Ile
 115 120 125
 Lys Asn Val Val Ser Ala Asp Gln Val Gly Lys Phe Pro Asp Ser Asn
 130 135 140
 Ile Gly Asp Ala Leu Lys Arg Ile Ser Gly Ile Asn Val Gln Tyr Asp
 145 150 155 160
 Gln Gly Glu Ala Arg Phe Gly Gln Val Arg Gly Thr Ser Ala Asp Leu

165	170	175
Ser Ser Val Thr Ile Asn Gly Asn Arg	Ile Pro Ser Ala Glu	Gly Asp
180	185	190
Thr Arg Asn Val Gln Leu Asp Leu	Ile Pro Ala Asp Met	Ile Gln Thr
195	200	205
Ile Glu Val Ser Lys Val Val	Thr Ser Asp Met	Asp Ala Asp Ala Ile
210	215	220
Gly Gly Ser Ile Asn Leu Val Thr Lys Asn Ser	Pro Tyr Lys Arg Thr	
225	230	240
Leu Thr Ala Thr Ala Gly Ser Gly Tyr Asn Trp	Ile Ser Glu Lys Ala	
245	250	255
Gln Leu Asn Leu Gly Leu Thr Tyr	Gly Asp Arg Phe Phe Asn Asp Lys	
260	265	270
Leu Gly Val Met Leu Ser Ala Ser Tyr	Gln Asn Ala Pro Ser Gly Ser	
275	280	285
Tyr Asp Thr Glu Phe Leu Trp Glu	Lys Asp Asp Lys Gly Asn Val Tyr	
290	295	300
Ile Asn Asp Tyr Gln Ile Arg Gln Tyr Tyr Val	Thr Arg Glu Arg Gln	
305	310	320
Ser Tyr Ser Ala Ala Leu Asp Trp Asp	Ile Ser Glu Asn His Lys Leu	
325	330	335
Met Phe Lys Gly Ile Phe Asn Asn Arg Asn Asp Trp	Glu Asn Arg Tyr	
340	345	350
Arg Thr Thr Leu Lys Asp Met Asp	Glu Glu Gly Lys Ala Thr Val Arg	
355	360	365
Val Gln Thr Lys Ala Gly Thr Pro Asp Asn Arg	Asn Ala Arg Leu Glu	
370	375	380
Arg Gln Arg Thr Met Asp Phe Thr Leu Gly	Gly Glu His Leu Phe Gly	
385	390	400
Pro Val Ser Met Asp Trp Asn Ala Ser Tyr	Ala Lys Ala Thr Glu Glu	
405	410	415
Arg Pro Asn Glu Arg Tyr Ile Asp Phe Gln Leu Lys	Lys Gln Gln Phe	
420	425	430
Asp Met Asp Leu Ser Asn Glu Arg Glu Pro Leu Ala	Thr Pro Lys Ser	
435	440	445
Gly Ser Thr Met Thr Leu Asn Lys Asp Phe Gly	Leu Lys Glu Leu Thr	
450	455	460
Glu Gln Gln Glu Asp Ile Lys Glu Lys Asp	Leu Lys Phe Ser Met Asn	
465	470	480
Phe Lys Leu Pro Phe Arg Asn Gly Asn Lys	Leu Lys Phe Gly Ala Lys	
485	490	495
Val Val Arg Lys Thr Lys Asp Lys	Glu Val Asp Phe Tyr Glu Tyr Thr	
500	505	510
Pro Lys Asp Glu Ala Phe Met Ala Asn Ser	Leu Gln Asn Thr Val	
515	520	525
Asp Gln Thr Asn Lys Asn Phe Met Pro Asp His	Lys Tyr Gln Ala Gly	
530	535	540
Ile Tyr Ala Asp Lys Gln Tyr Val Gly	Ser Leu Asp Leu Asn Asn Pro	
545	550	560
Ser Leu Phe Asp Lys Glu Gln Val Gln	Glu Leu Ala Gly Asn Phe	
565	570	575
Glu Ala Arg Glu Thr Val Ser Ser Gly	Tyr Ile Arg Phe Asp Gln Lys	
580	585	590
Leu Thr Asp Asn Val Glu Leu Met Thr	Gly Leu Arg Ile Glu Asn Thr	
595	600	605
Ser Leu Ser Tyr Thr Gly Arg Thr Tyr Asp Asp	Glu Thr Asp Gln Thr	
610	615	620
Ser Lys Thr Ala Arg Glu Thr Asn Ser Tyr	Ile Asn Phe Leu Pro Ser	
625	630	640

Leu Leu Met Lys Trp Asn Val Asn Glu Asp Phe Lys Val Arg Gly Ser
 645 650 655
 Phe Thr Gln Thr Leu Ser Arg Pro Lys Tyr Ser Ala Leu Val Pro Ser
 660 665 670
 Val Asn Ile Lys Arg Ser Asp Asn Glu Val Thr Val Gly Asn Pro Gly
 675 680 685
 Leu Lys Pro Thr Leu Ser Tyr Asn Phe Asp Leu Ser Ala Asp Tyr Tyr
 690 695 700
 Phe Lys Ser Ile Gly Leu Val Ser Ala Gly Val Phe Tyr Lys Ile
 705 710 715 720
 Asp Asp Phe Ile Val Asn Gln Val Ser Thr Asn Tyr Glu Tyr Asn Gly
 725 730 735
 Asn Leu Tyr Asn Arg Phe Ile Gln Pro Lys Asn Ala Gly Asn Ala Asn
 740 745 750
 Leu Ile Gly Met Glu Leu Ser Tyr Gln Arg Asp Phe Gly Phe Ile Ala
 755 760 765
 Pro Ala Leu Lys Cys Ile Gly Phe Tyr Gly Thr Tyr Thr Phe Thr His
 770 775 780
 Ser Arg Val Glu Asp Phe Asn Phe Glu Gly Arg Glu Asn Glu Lys Asp
 785 790 795 800
 Leu Ser Leu Pro Gly Ser Pro Lys His Thr Ala Asn Ala Ser Leu
 805 810 815

<210> 10437

<211> 74

<212> PRT

<213> B.fragilis

<400> 10437

Phe Leu Val Leu Met Glu Leu Gly Lys Tyr Pro Gly Arg Gly Val Lys
 1 5 10 15
 Ala Lys Arg Ile Lys Thr Val Glu Ile Asn His Leu Ile Asn Tyr Lys
 20 25 30
 Tyr Gly Lys Ser Lys Leu Val Gln Cys Lys Pro His Val Gly Gln Glu
 35 40 45
 Arg Trp Arg Phe Asp Asn Gln Cys Gly Cys Ser His Arg Thr Cys Ser
 50 55 60
 Thr Lys Tyr Ser Ser Tyr Arg Asn Ser Gly
 65 70

<210> 10438

<211> 134

<212> PRT

<213> B.fragilis

<400> 10438

Arg Leu Pro Leu Arg Lys Gly Arg Pro Cys Gln Val Lys Leu Arg Ser
 1 5 10 15
 Leu Lys Leu Leu Gln Pro Tyr Asp Leu Asp Lys Glu Gln Glu Leu Val
 20 25 30
 Pro Met Thr Pro Gln Gln Ala Thr Trp Lys Val Phe Thr Tyr Phe Asp
 35 40 45
 Arg Asp Met Glu Leu Arg Val Gln Glu Leu Arg Glu Gln Pro Gly Ile
 50 55 60
 Ile Arg Val Asp Val Val Ala Lys Glu Val Leu Thr Arg Pro Glu Glu
 65 70 75 80
 Gly Asp Phe Asp Met Tyr Pro Pro Pro Ser Leu Gln Asp Val Ala Asp
 85 90 95
 Arg Arg Lys Ile Met Tyr Thr Tyr Lys Gly Lys Leu Lys Tyr Arg Pro

100	105	110
Tyr Pro Pro Gly Leu Thr Gln Glu	Glu Val Val Asn Tyr	Arg Ala Gly
115	120	125
Val Ile Ala Val Lys Ile		
130		

<210> 10439

<211> 399

<212> PRT

<213> B.fragilis

<400> 10439

1	5	10	
Val Arg Met Ser Phe Glu Ile Ile Arg Lys Thr Gly Glu Ile Ala Phe			
20	25	30	
Ile Glu Ile Arg Leu Arg Val Gly Ala Gln Glu Val Phe Ser Ala Ser			
35	40	45	
Tyr Val Pro Phe Gly Asp Arg Ile His Phe Asp Ile Ala Glu Ile Leu			
50	55	60	
Gln Pro Phe Val Thr Ser Gly Pro Leu Glu Asp Ser Glu Asp Leu Ile			
65	70	75	80
Leu Pro Val Ser Gly Phe Met Ala Gly Tyr Thr Leu Glu Val Lys Gly			
85	90	95	
Arg Glu Thr Arg Thr Leu Thr Gly Lys Val Ile Cys Gly Gly Ile Ser			
100	105	110	
Lys Gln Ala Ala Arg Glu Met Ala Gly Arg Gly Thr Asp Phe Ile Leu			
115	120	125	
Asn Arg Leu Arg Asp Tyr Ser Ser Gln Phe Leu Phe Thr Thr Arg Thr			
130	135	140	
Arg Gly Lys His Ile Ala Ile Arg Glu Thr Glu Val Ser Pro Leu Ile			
145	150	155	160
Phe Ile His Pro Asp Lys Arg Ile Gln Val Glu Ser Glu Tyr Gly Asn			
165	170	175	
Arg Ile Lys Leu Pro Glu Gly Thr Ala Gly Glu Val Tyr Ala Leu Asn			
180	185	190	
Ile Gly Arg Ile Arg Arg Glu Phe Phe His Arg Tyr Asn Gln Ile Val			
195	200	205	
Ser Phe Ile Arg Val Leu Val Pro Ala Glu Glu Ala Phe Asp Ile Ser			
210	215	220	
Phe Thr Pro Gly Glu Val Ser Glu Asn Gly Leu Ser Phe Leu Phe Arg			
225	230	235	240
Asn Ser Leu Gly Cys Tyr Glu Val Ile Glu Met Pro Gly Lys Met Ile			
245	250	255	
Tyr Ser Leu Asp Arg Gly Asp Asp Glu Asn Tyr Arg Thr Phe Asp Glu			
260	265	270	
Glu Gly Gly Asp Tyr Ile Thr Gly Arg Pro Arg Pro Asp Leu Leu Gln			
275	280	285	
Lys Met Lys Leu Asn Thr Gly Phe Lys Arg Lys Thr Glu Leu Lys Phe			
290	295	300	
Ile Gln Asp Leu Leu Ser Ser Asp Asp Ile Arg Leu Leu Asn Gly Thr			
305	310	315	320
Ala Arg Arg Arg Val Leu Val Thr Cys Glu Glu Tyr Gly Tyr Glu Glu			
325	330	335	
Pro Met Lys Glu Pro Thr Ser Leu Val Leu Asp Ile Glu Val Ala Glu			
340	345	350	
Arg Glu Ser Asn Tyr Thr Pro Asp Met Asp Gly Glu Asn Ala Pro Pro			
355	360	365	
Phe Ile Glu Leu Leu Pro Gly Glu Val Glu Ile Pro Ser Glu Gly Gly			

370	375	380
Gln Val Arg Val Arg Val	Glu Ser Asn Ile Met	Trp Glu Val Val
385	390	395

<210> 10440

<211> 144

<212> PRT

<213> B.fragilis

<400> 10440

Ile Thr Ser Met Ala Lys Ala Ser Trp Cys Asn Val Ser Pro Met Ser		
1 5 10 15		
Gly Lys Arg Asp Gly Val Leu Thr Ile Ser Ala Gly Ala His Thr Gly		
20 25 30		
Arg Val Ala Arg Asn Thr Val Val Thr Val Thr Ala Ala Asn Gly Thr		
35 40 45		
Arg Pro Ser Ala Ser Ile Ala Val Ser Gln Ala Gly Ala Gly Val Phe		
50 55 60		
Pro Thr Met Asp Thr Ser Lys Pro Asp Leu Ser Ser Ser Arg Gly Val		
65 70 75 80		
Val Asn Ile Asn Gly Thr Ser Asn Ile Ser Lys Leu Lys Trp Thr Cys		
85 90 95		
Pro Ala Arg Ile Met Gly Val Asp Met Pro Ile Asp Gly Asn Tyr Phe		
100 105 110		
Lys Asn Gly Gly Lys Thr Val Gly Ile Leu Gly Asn Asn Gly Gly Tyr		
115 120 125		
Ser Gly Glu Pro Arg Thr Leu Gly Pro Phe Lys Leu Cys Trp Arg Leu		
130 135 140		

<210> 10441

<211> 253

<212> PRT

<213> B.fragilis

<400> 10441

Ile Ile Phe Ala Val Arg Tyr Met Glu Gly Glu Ala Gly Asn Asn Asn		
1 5 10 15		
Asn Leu Phe Thr Tyr Ala Met Ala Thr Gly Ser Thr Lys Asp Asn Tyr		
20 25 30		
Leu Ala Asn Gly Glu Lys Phe Leu Asp Ala Leu Asn Ile Ala Asn Thr		
35 40 45		
Gly Ser Gln Gln Leu Glu Tyr Lys His Glu Ile Tyr Asn Ser Phe Asp		
50 55 60		
Val Ala Asp Thr Arg Arg Glu Ala Thr Phe Ile Ala Ser Tyr Ser Lys		
65 70 75 80		
Asn Thr Glu Thr Lys Glu Leu Thr Leu Arg Gly Thr His Val Arg Lys		
85 90 95		
Asn Ile Gly Tyr Val Asn Ala Gln Gly Ser Arg Ile Tyr Cys Gly Asp		
100 105 110		
Tyr Ile Ile Tyr Arg Leu Pro Leu Val Tyr Leu Met Leu Ala Glu Ile		
115 120 125		
Glu Asn Met Gln Gly Gly Asp Val Ala Lys Tyr Ile Asn Leu Val Arg		
130 135 140		
Glu Arg Ala Tyr Ser Thr Asn Trp Asp Lys Ala Ile Tyr Gly Tyr Thr		
145 150 155 160		
Asn Ala Asp Phe Thr Thr Asn Glu Leu Ala Ile Leu His Glu Lys Asp		
165 170 175		
Lys Glu Phe Ile Gln Glu Gly Gln Arg Trp Trp Asp Ile Arg Arg Met		
180 185 190		

Thr Leu Thr Lys Gly Gly Lys His Leu Val Phe Val Lys Glu Gly Ser
 195 200 205
 Ile Gly Thr Asp Met Pro Thr Leu Asp Glu Ala Thr Glu Ala His Lys
 210 215 220
 Val Leu Trp Pro Val Asp Lys Asp Leu Leu Gly Asn Asp Pro Leu Ile
 225 230 235 240
 Tyr Gln Thr Pro Gly Tyr Ala Thr Tyr Lys Lys Ala Glu
 245 250

<210> 10442

<211> 360

<212> PRT

<213> B.fragilis

<220>

<221> UNSURE

<222> (308), (347)

<223> Identity of amino acid sequences at the above locations are unknown.

<400> 10442

Lys Ala Ile Leu Met Lys Lys Thr Ile Phe Leu Ile Leu Cys Ile Leu
 1 5 10 15
 Cys Ser Leu Gly Ala Met Ala Gln Lys Lys Ser Ile Thr Gly Val Ile
 20 25 30
 Thr Asp Gly Ala Gly Glu Ser Ile Ile Gly Ala Ser Val Val Glu Val
 35 40 45
 Gly Thr Thr Asn Gly Thr Ile Thr Asp Phe Asp Gly Lys Phe Ser Leu
 50 55 60
 Thr Ile Ala Thr Gly Ala Lys Phe Thr Val Ser Tyr Ile Gly Tyr Lys
 65 70 75 80
 Ser Gln Thr Ile Thr Val Gly Ala Glu Asn Thr Tyr Asn Ile Val Leu
 85 90 95
 Lys Glu Asp Thr Glu Val Leu Asp Glu Val Val Ile Thr Gly Tyr Gly
 100 105 110
 Gly Ser Gln Lys Arg Ala Thr Leu Thr Thr Ala Ile Ser Lys Leu Asp
 115 120 125
 Asn Ser Val Leu Lys Asn Ala Ala Phe Ser Asn Ala Gly Gln Ser Leu
 130 135 140
 Gln Gly Ser Val Thr Gly Leu Arg Val Val Asn Lys Thr Gly Gln Pro
 145 150 155 160
 Gly Ser Glu Pro Asp Ile Thr Leu Arg Gly Gly Ala Thr Ile Thr Gly
 165 170 175
 Asp Asn Ser Lys Ala Leu Ile Val Val Asp Gly Ile Val Arg Asn Ser
 180 185 190
 Met Ser Asp Ile Asn Pro Ser Asp Ile Glu Ser Ile Gln Val Leu Lys
 195 200 205
 Asp Ala Ala Ser Thr Ala Ile Tyr Gly Ala Arg Ala Asn Gly Val
 210 215 220
 Ile Leu Val Glu Thr Lys Ser Gly Lys Glu Gly Lys Ala Ser Val Asn
 225 230 235 240
 Tyr Lys Phe Lys Met Gly Val Asn Phe Ala Arg Lys Gly Tyr Asp Phe
 245 250 255
 Cys Asp Ala His Asp Tyr Ile Tyr Tyr Asn Arg Leu Gly Tyr Lys Arg
 260 265 270
 Thr Gly Arg Thr Asn Val Asp Thr Gln Met Gly Tyr Gly Ile Gly Asn
 275 280 285
 Asn Leu Phe Asp Ile Arg Tyr Leu Thr Asp Glu Asn Ala Asn Leu Lys
 290 295 300
 Asn Glu Gly Xaa Ala Ser Met Ala Asp Pro Phe Tyr Asp Gly Lys Thr

305	310	315	320
Ile Leu Tyr Lys Asp Tyr Ser Gly Glu Leu Asp Asp Val Val Phe Asn			
325	330	335	
Asn Ser Ala Leu Thr Gln Asp His Tyr Val Xaa Ile Thr Gly Gly Asn			
340	345	350	
Asp Lys Arg Thr Phe Leu Pro Ala			
355	360		

<210> 10443

<211> 71

<212> PRT

<213> B.fragilis

<400> 10443

Ala Lys Asn Gly Glu Lys Arg Lys Phe Cys Glu Tyr Phe Gln Thr Ser			
1 5 10 15			
Lys Asn Gln Ala Phe Ile Leu Phe Leu Val Leu Val Phe Ser Leu His			
20 25 30			
Lys Gly Leu Lys Met Asn Leu Leu Glu Gly Asp Lys Ser Ser Ile Lys			
35 40 45			
Ile Arg Leu Ile His Leu Leu Lys Asn Glu Leu Met Ile Phe Phe Gln			
50 55 60			
Asn Pro Thr Glu Val Arg Cys			
65 70			

<210> 10444

<211> 752

<212> PRT

<213> B.fragilis

<400> 10444

Ile Pro Pro Gly Ala Asp Ile Ser Pro Leu Val Tyr Pro Phe Pro Thr			
1 5 10 15			
Phe Leu Arg Gly Arg Gly Ile Leu Thr Gln Ile Phe Ser Leu Thr			
20 25 30			
Leu Gly Ala Leu Val Gly Ile Leu Leu Phe Ala Arg Val Ala Phe Ala			
35 40 45			
Leu Asn Tyr Asp Arg Tyr Tyr Gln Glu Pro Glu Asn Leu Phe Leu Thr			
50 55 60			
Leu Arg Thr Val Val Ser Gln Gly Glu Lys Lys Glu Pro Val Cys Ser			
65 70 75 80			
Asn Tyr Gly Lys Leu Pro Ala Ala Ile Arg Glu Asn Phe Pro Asp Glu			
85 90 95			
Val Glu Asp Ala Thr Leu Ile Asp Leu Phe Ser Arg Ser Ser Leu Tyr			
100 105 110			
His Glu Gly Gln Glu Lys Lys Asp Ala Ile Leu Ala Thr Ser Arg Ser			
115 120 125			
His Ile Phe Ser Thr Leu Gly Val Lys Val Leu Ser Gly Asn Val Ser			
130 135 140			
Glu Leu Asp Asn Met Asp Ala Leu Phe Ile Ser Arg Ser Leu Ala Gln			
145 150 155 160			
Ser Leu Phe Ala Asp Ala Asp Pro Ile Gly Lys Thr Val Met Ile Asn			
165 170 175			
Ile Asp Tyr Pro Leu Thr Val Arg Gly Val Phe Glu Asp Ile Pro Glu			
180 185 190			
Asn Ala Glu Phe Arg Phe Asp Gly Val Tyr Ser Phe Val Thr Arg Ala			
195 200 205			
Asn Arg Phe Arg Asp Glu Arg Gly Gly Trp Arg Gly Asp Ile Ser Tyr			
210 215 220			

Thr Cys Met Val Arg Phe Arg His Pro Glu Asp Val Glu Lys Val Ala
 225 230 235 240
 Ala Arg Met Pro Asp Met Met Lys Lys Tyr Ile Gln Tyr Asn Lys Asp
 245 250 255
 Trp Phe Glu Glu Phe Ser Phe Ile Thr Pro Ser Gln Phe His Leu Gln
 260 265 270
 Lys Lys Glu Ser Arg Lys Ile Ile Ser Ile Leu Ser Ile Leu Gly Phe
 275 280 285
 Ala Ile Leu Leu Ile Ala Gly Met Asn Asn Val Leu Ile Ser Ile Ser
 290 295 300
 Ser Leu Pro Gln Arg Ala Lys Ser Val Gly Val His Lys Cys Ser Gly
 305 310 315 320
 Ala Ser Thr Gly His Ile Tyr Arg Met Phe Leu Trp Glu Ser Ala Leu
 325 330 335
 Leu Ile Leu Val Ser Leu Leu Gly Val Ile Val Leu Leu Leu Tyr Phe
 340 345 350
 Lys Pro Glu Ile Glu Asp Leu Ser Gly Ala Ser Leu Ala Thr Leu Phe
 355 360 365
 Thr Trp Arg Thr Leu Trp Val Pro Ala Leu Val Thr Ile Phe Leu Phe
 370 375 380
 Leu Leu Ile Gly Leu Leu Pro Gly Lys Leu Phe Ser Ser Ile Pro Val
 385 390 395 400
 Thr Gln Val Phe His Arg Phe Thr Gly Tyr Arg Ala Ser Trp Lys Tyr
 405 410 415
 Pro Leu Leu Phe Val Gln Phe Thr Gly Val Ala Phe Ile Leu Gly Leu
 420 425 430
 Leu Met Ile Ile Leu Leu Gln Tyr Asn Gln Val Met Asn Arg Ser Met
 435 440 445
 Gly Tyr Lys Ile Asp Asn Leu Val Ile Gly Trp Gly Pro Phe Asp Ser
 450 455 460
 Met Asp Lys Ile Asp Gly Ile Leu Arg Gly Leu Pro Phe Ile Glu Ala
 465 470 475 480
 Ser Cys Asn Ser Ala Ser Phe Ile Tyr Asn Gly His Thr Arg Gln Ser
 485 490 495
 Phe Thr Asp Ile Asn Gly Lys Arg Phe Met Gly Cys Ile Asp Phe Ile
 500 505 510
 Asp Glu His Tyr Val Pro Ile Leu Gly Leu Gln Ile Leu Gln Gly Arg
 515 520 525
 Asn Val His Gln Asp Gly Glu Val Leu Val Asn Glu Glu Leu Leu Arg
 530 535 540
 Gln Val Gly Trp Thr Asp Ser Pro Ile Gly Arg Lys Leu Met Glu Asp
 545 550 555 560
 Asn Tyr Glu Trp Gly Thr Val Val Gly Val Val Lys Asp Tyr Val Ala
 565 570 575
 Gln Ser Ala Tyr Gln Pro Gln Thr Ser Val Ala Leu Val Ser Ser Leu
 580 585 590
 Glu Arg Arg Trp Glu Ala Asn Lys Arg Asn Leu Ile Leu Lys Glu Pro
 595 600 605
 Phe Lys Glu Asn Leu Ser Lys Ile Arg Ala Leu Met Lys Glu Thr Phe
 610 615 620
 Pro Thr Glu Asp Ile Gln Phe Arg Ser Ala Arg Gln Glu Val Asp Asn
 625 630 635 640
 Leu Tyr Gln Val Val Arg Arg Phe Arg Asn Ile Val Ile Val Ala Ser
 645 650 655
 Val Ser Ile Val Val Ile Val Leu Met Gly Leu Phe Gly Phe Val Asn
 660 665 670
 Asp Glu Val Gln Arg Arg Ser Lys Glu Ile Ala Ile Arg Lys Val Asn
 675 680 685
 Gly Ala Glu Ser Gly Asn Ile Ile Asn Leu Leu Asn His Asn Ile Phe

6222

690 695 700
Trp Ile Ala Leu Pro Ala Ile Phe Val Gly Ile Ala Leu Ala Tyr Val
705 710 715 720
Val Gly His Lys Trp Val Glu Gln Phe Thr Asp Gln Ile Val Leu Ser
725 730 735
Ser Pro Arg Asp Val Ser Asp Gln Gly Gln Tyr His Gly Gly Gln
740 745 750

Trp Ile Ala Leu Pro Ala Ile Phe Val Gly Ile Ala Leu Ala Tyr Val
Val Gly His Lys Trp Val Glu Gln Phe Thr Asp Gln Ile Val Leu Ser
Ser Pro Arg Asp Val Ser Asp Gln Gly Gln Tyr His Gly Gly Gln